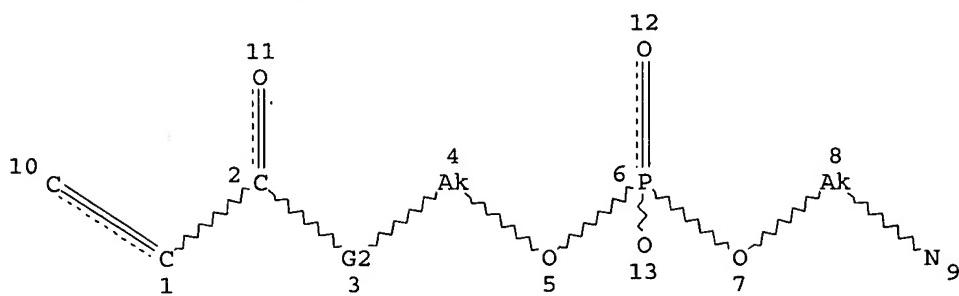


SP2

Fetterolf 10/626,502

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=> d que stat l13
L11 STR



VAR G2=O/N
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

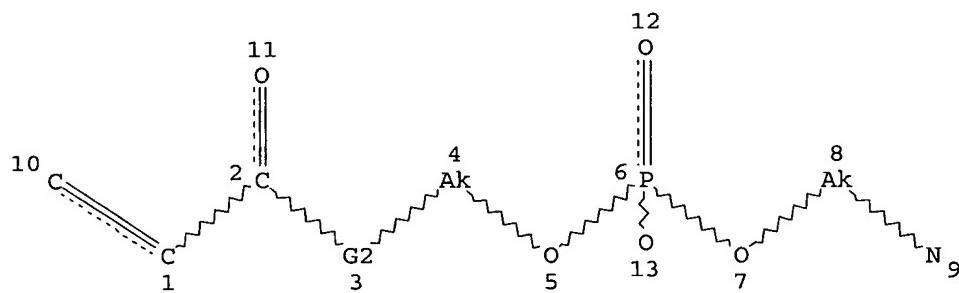
GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
L13 832 SEA FILE=REGISTRY SSS FUL L11

100.0% PROCESSED 56776 ITERATIONS
SEARCH TIME: 00.00.03

832 ANSWERS

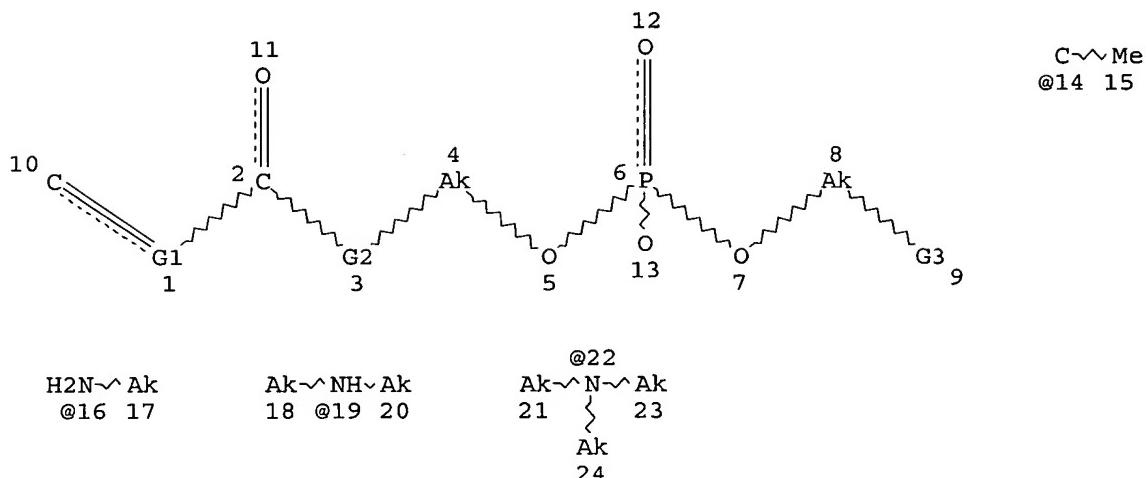
=> d que stat l18
L11 STR



VAR G2=O/N
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
L13 832 SEA FILE=REGISTRY SSS FUL L11
L16 STR



```
VAR G1=CH/14  
VAR G2=O/NH  
VAR G3=NH3/16/19/22  
NODE ATTRIBUTES:  
CONNECT IS E1 RC A  
DEFAULT MLEVEL IS A  
DEFAULT FCLEVEL IS
```

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE
L18 553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16

100.0% PROCESSED 832 ITERATIONS 553 ANSWERS
SEARCH TIME: 00.00.01

=> d 164 1-17
L64 ANALYZE L18 1- LC : 17 TERMS

TERM #	# OCC	# DOC	% DOC	LC
1	535	535	96.75	CA
2	535	535	96.75	CAPLUS
3	255	255	46.11	TOXCENTER
4	115	115	20.80	USPATFULL
5	29	29	5.24	USPAT2
6	3	3	0.54	BIOSIS
7	3	3	0.54	CHEMLIST
8	3	3	0.54	MEDLINE
9	2	2	0.36	CASREACT
10	2	2	0.36	DIOGENES
11	2	2	0.36	IPA
12	2	2	0.36	TSCA
13	1	1	0.18	BIOBUSINESS
14	1	1	0.18	CANCERLIT
15	1	1	0.18	CHEMINFORMRX
16	1	1	0.18	PIRA
17	1	1	0.18	PROMT

***** END OF L64***

```
=> d que nos 133
L11      STR
L13      832 SEA FILE=REGISTRY SSS FUL L11
L16      STR
L18      553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L24      715 SEA FILE=HCAPLUS ABB=ON PLU=ON L18
L25      56930 SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOASSAY+PFT,NT/CT
L26      47927 SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS (L)
          IMMUNOASSAY"+PFT,NT/CT
L27      5294 SEA FILE=HCAPLUS ABB=ON PLU=ON AGGLUTINATION+PFT,NT/CT
L28      17 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND (L25 OR L26 OR L27)
L29      QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
          LISA OR RIA
L31      16 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 (L) L29
L33      23 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 OR L31
```

=> d his 139

```
(FILE 'USPATFULL, USPAT2' ENTERED AT 14:41:23 ON 20 SEP 2005)
L39      3 S L35 AND L38
```

```
=> d que nos 139
L11      STR
L13      832 SEA FILE=REGISTRY SSS FUL L11
L16      STR
L18      553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L35      78 SEA L18
L38      23444 SEA G01N033-5?/IPC
L39      3 SEA L35 AND L38
```

=> d que nos 162

```
L40      2142 SEA FILE=WPIX ABB=ON PLU=ON (B415 (P) B701 (P) B713 (P) B815
          (P) B831 (P) H1 (P) J011)/M0,M1,M2,M3,M4,M5,M6
L50      408 SEA FILE=WPIX ABB=ON PLU=ON C08F030-02/IPC
L59      58 SEA FILE=WPIX ABB=ON PLU=ON L40 AND (G01N033-53?/ICM, ICS)
L62      2 SEA FILE=WPIX ABB=ON PLU=ON L59 AND L50
```

=> d que nos 166

```
L11      STR
L13      832 SEA FILE=REGISTRY SSS FUL L11
L16      STR
L18      553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L63      QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
          LISA OR RIA OR ?COAG?
L65      260 SEA FILE=TOXCENTER ABB=ON PLU=ON L18
L66      31 SEA FILE=TOXCENTER ABB=ON PLU=ON L65 AND L63
```

=> d que nos 172

```
L11      STR
L13      832 SEA FILE=REGISTRY SSS FUL L11
L16      STR
L18      553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L63      QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
```

LISA OR RIA OR ?COAG?

L67	55	SEA FILE=MEDLINE ABB=ON	PLU=ON	L18
L68	282436	SEA FILE=MEDLINE ABB=ON	PLU=ON	IMMUNOASSAY+PFT, NT/CT
L69	6576	SEA FILE=MEDLINE ABB=ON	PLU=ON	AGGLUTINATION+PFT, NT/CT
L70	3	SEA FILE=MEDLINE ABB=ON	PLU=ON	L67 AND (L68 OR L69)
L71	21	SEA FILE=MEDLINE ABB=ON	PLU=ON	L67 AND L63
L72	21	SEA FILE=MEDLINE ABB=ON	PLU=ON	(L70 OR L71)

=> d que nos 173

L11	STR
L13	832 SEA FILE=REGISTRY SSS FUL L11
L16	STR
L18	553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L73	0 SEA FILE=EMBASE ABB=ON PLU=ON L18

=> d his 175

(FILE 'BIOSIS, CANCERLIT' ENTERED AT 15:20:16 ON 20 SEP 2005)

L75	13 S L74 AND L63
-----	------------------

=> d que nos 175

L11	STR
L13	832 SEA FILE=REGISTRY SSS FUL L11
L16	STR
L18	553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L63	QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E LISA OR RIA OR ?COAG?
L74	57 SEA L18
L75	13 SEA L74 AND L63

=> d his 181

(FILE 'HCAPLUS, TOXCENTER, WPIX, MEDLINE, BIOSIS, CANCERLIT, EMBASE,
PASCAL, JICST-EPLUS, DRUGU, BIOTECHNO, BIOTECHDS, SCISEARCH, CONF,
CONFSCI, DISSABS' ENTERED AT 15:25:01 ON 20 SEP 2005)

L81	6 DUP REM L80 (6 DUPLICATES REMOVED)
-----	--------------------------------------

=> d que nos 181

L63	QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E LISA OR RIA OR ?COAG?
L76	1325 SEA SUMIDA, K?/AU
L77	17872 SEA WADA, K?/AU
L78	14175 SEA ISHIHARA, K?/AU
L79	3656 SEA (L76 OR L77 OR L78) AND L63
L80	12 SEA L79 AND WAKO/CS, SO, PA
L81	6 DUP REM L80 (6 DUPLICATES REMOVED)

=> d his ful

(FILE 'HOME' ENTERED AT 12:50:28 ON 20 SEP 2005)

FILE 'STNGUIDE' ENTERED AT 12:50:39 ON 20 SEP 2005

FILE 'HCAPLUS' ENTERED AT 12:51:02 ON 20 SEP 2005

L1 0 SEA ABB=ON PLU=ON US2003-626502/APPS

FILE 'STNGUIDE' ENTERED AT 12:51:19 ON 20 SEP 2005

FILE 'ZCPLUS' ENTERED AT 12:52:40 ON 20 SEP 2005
E JP2001-169051/APPS

L2 FILE 'HCPLUS' ENTERED AT 12:52:48 ON 20 SEP 2005
1 SEA ABB=ON PLU=ON JP2001-169051/APPS
SAVE TEMP L2 FET502HCAAPP/A
D IBIB ED AB IND

FILE 'STNGUIDE' ENTERED AT 12:53:16 ON 20 SEP 2005

L3 FILE 'HCPLUS' ENTERED AT 12:54:13 ON 20 SEP 2005
1 SEA ABB=ON PLU=ON US2004-626502/APPS
SAVE TEMP L3 FET502HCAAP2/A

FILE 'STNGUIDE' ENTERED AT 12:54:48 ON 20 SEP 2005

FILE 'HCPLUS' ENTERED AT 12:55:14 ON 20 SEP 2005
D IBIB ED AB IND

FILE 'STNGUIDE' ENTERED AT 12:55:14 ON 20 SEP 2005

L4 FILE 'HCPLUS' ENTERED AT 12:56:22 ON 20 SEP 2005
0 SEA ABB=ON PLU=ON L2 NOT L3

FILE 'STNGUIDE' ENTERED AT 12:56:30 ON 20 SEP 2005

L5 FILE 'WPIX' ENTERED AT 12:56:35 ON 20 SEP 2005
1 SEA ABB=ON PLU=ON US2004-626502/APPS
SAVE TEMP L5 FET502WPIAPP/A
D IALL CMC

FILE 'STNGUIDE' ENTERED AT 12:57:05 ON 20 SEP 2005

FILE 'REGISTRY' ENTERED AT 12:57:35 ON 20 SEP 2005

L6 FILE 'HCPLUS' ENTERED AT 12:57:42 ON 20 SEP 2005
TRA L3 1- RN : 9 TERMS

L7 FILE 'REGISTRY' ENTERED AT 12:57:45 ON 20 SEP 2005
9 SEA ABB=ON PLU=ON L6
SAVE TEMP L7 FET502REGAPP/A
D SCAN

FILE 'STNGUIDE' ENTERED AT 12:58:14 ON 20 SEP 2005
D SAVED

L8 FILE 'LREGISTRY' ENTERED AT 13:02:29 ON 20 SEP 2005
STRUCTURE UPLOADED
STR L8

L9 FILE 'REGISTRY' ENTERED AT 13:05:36 ON 20 SEP 2005
0 SEA SSS SAM L9
D QUE STAT

FILE 'STNGUIDE' ENTERED AT 13:05:56 ON 20 SEP 2005

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L11 FILE 'LREGISTRY' ENTERED AT 13:06:35 ON 20 SEP 2005
STR L9

L12 FILE 'REGISTRY' ENTERED AT 13:07:51 ON 20 SEP 2005
25 SEA SSS SAM L11

FILE 'STNGUIDE' ENTERED AT 13:08:58 ON 20 SEP 2005
D QUE STAT

L13 FILE 'REGISTRY' ENTERED AT 13:09:57 ON 20 SEP 2005
832 SEA SSS FUL L11
SAVE TEMP L13 FET502PSET1/A

L14 5 SEA ABB=ON PLU=ON L13 AND L7

L15 4 SEA ABB=ON PLU=ON L7 NOT L14
D SCAN

FILE 'STNGUIDE' ENTERED AT 13:10:56 ON 20 SEP 2005
D SAVED

L16 FILE 'LREGISTRY' ENTERED AT 13:11:22 ON 20 SEP 2005
STR L11

FILE 'REGISTRY' ENTERED AT 13:15:51 ON 20 SEP 2005
26 SEA SUB=L13 SSS SAM L16

L18 553 SEA SUB=L13 SSS FUL L16
SAVE TEMP L18 FET502RSET1/A

FILE 'STNGUIDE' ENTERED AT 13:17:43 ON 20 SEP 2005
D SAVED

FILE 'REGISTRY' ENTERED AT 13:18:01 ON 20 SEP 2005
5 SEA ABB=ON PLU=ON L14 AND L18

FILE 'STNGUIDE' ENTERED AT 13:18:30 ON 20 SEP 2005

FILE 'REGISTRY' ENTERED AT 13:18:37 ON 20 SEP 2005
D SCAN

FILE 'STNGUIDE' ENTERED AT 13:18:45 ON 20 SEP 2005

L20 FILE 'HCAPLUS' ENTERED AT 13:19:12 ON 20 SEP 2005
715 SEA ABB=ON PLU=ON L18

FILE 'STNGUIDE' ENTERED AT 13:19:23 ON 20 SEP 2005

L21 FILE 'LREGISTRY' ENTERED AT 13:19:43 ON 20 SEP 2005
STR L16

FILE 'STNGUIDE' ENTERED AT 13:21:43 ON 20 SEP 2005

L22 FILE 'REGISTRY' ENTERED AT 13:22:37 ON 20 SEP 2005
495 SEA ABB=ON PLU=ON L18 AND PMS/CI

L23 FILE 'HCAPLUS' ENTERED AT 13:23:06 ON 20 SEP 2005
595 SEA ABB=ON PLU=ON L22

FILE 'STNGUIDE' ENTERED AT 13:23:11 ON 20 SEP 2005

FILE 'ZCAPLUS' ENTERED AT 14:31:19 ON 20 SEP 2005
E IMMUNOASSAY/CT

E E15+ALL
E AGGLUTINATION/CT
E E102+ALL

FILE 'HCAPLUS' ENTERED AT 14:32:44 ON 20 SEP 2005
L24 715 SEA ABB=ON PLU=ON L18
L25 56930 SEA ABB=ON PLU=ON IMMUNOASSAY+PFT, NT/CT
L26 47927 SEA ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS (L) IMMUNOASSAY"+P
FT, NT/CT
L27 5294 SEA ABB=ON PLU=ON AGGLUTINATION+PFT, NT/CT
L28 17 SEA ABB=ON PLU=ON L24 AND (L25 OR L26 OR L27)

FILE 'STNGUIDE' ENTERED AT 14:33:30 ON 20 SEP 2005

FILE 'HCAPLUS' ENTERED AT 14:34:15 ON 20 SEP 2005
D SCAN

FILE 'STNGUIDE' ENTERED AT 14:34:37 ON 20 SEP 2005

FILE 'HCAPLUS' ENTERED AT 14:37:13 ON 20 SEP 2005
L29 QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR ELISA
OR RIA
L30 62 SEA ABB=ON PLU=ON L24 AND L29
L31 16 SEA ABB=ON PLU=ON L24 (L) L29
L32 6 SEA ABB=ON PLU=ON L31 NOT L28
D SCAN
L33 23 SEA ABB=ON PLU=ON L28 OR L31

FILE 'STNGUIDE' ENTERED AT 14:39:15 ON 20 SEP 2005

FILE 'HCAPLUS' ENTERED AT 14:39:27 ON 20 SEP 2005
SAVE TEMP L33 FET502HCA1/A

FILE 'STNGUIDE' ENTERED AT 14:39:44 ON 20 SEP 2005
D QUE STAT
D SAVED

FILE 'HCAPLUS' ENTERED AT 14:40:58 ON 20 SEP 2005
L34 1 SEA ABB=ON PLU=ON L3 AND L33

FILE 'STNGUIDE' ENTERED AT 14:41:07 ON 20 SEP 2005

FILE 'USPATFULL' ENTERED AT 14:41:16 ON 20 SEP 2005

FILE 'USPATFULL, USPAT2' ENTERED AT 14:41:23 ON 20 SEP 2005
L35 78 SEA ABB=ON PLU=ON L18
L36 13193 SEA ABB=ON PLU=ON G01N033-53?/IPC
L37 1 SEA ABB=ON PLU=ON L35 AND L36
L38 23444 SEA ABB=ON PLU=ON G01N033-5?/IPC
L39 3 SEA ABB=ON PLU=ON L35 AND L38

FILE 'STNGUIDE' ENTERED AT 14:42:35 ON 20 SEP 2005

FILE 'USPATFULL, USPAT2' ENTERED AT 14:43:29 ON 20 SEP 2005
D SCAN L39
SAVE TEMP L39 FET502USP1/A

FILE 'STNGUIDE' ENTERED AT 14:44:05 ON 20 SEP 2005
D SAVED

FILE 'WPIX' ENTERED AT 14:53:50 ON 20 SEP 2005

L40 2142 SEA ABB=ON PLU=ON (B415 (P) B701 (P) B713 (P) B815 (P) B831
 (P) H1 (P) J011)/M0,M1,M2,M3,M4,M5,M6

L41 1 SEA ABB=ON PLU=ON L40 AND L5

L42 63776 SEA ABB=ON PLU=ON G01N033-5?/IPC

L43 17781 SEA ABB=ON PLU=ON (B11-C08E OR C11-C08E OR E11-C08E)/MC

L44 31675 SEA ABB=ON PLU=ON S03-E14H/MC

L45 127 SEA ABB=ON PLU=ON L40 AND (L42 OR L43 OR L44)

L46 119 SEA ABB=ON PLU=ON L45 AND (L42 OR L44)

L47 29713 SEA ABB=ON PLU=ON G01N033-53/IPC

L48 87 SEA ABB=ON PLU=ON L46 AND (L47 OR L44)

L49 62 SEA ABB=ON PLU=ON L48 AND L47

L50 408 SEA ABB=ON PLU=ON C08F030-02/IPC

L51 1 SEA ABB=ON PLU=ON L49 AND L50

L52 36 SEA ABB=ON PLU=ON L49 AND (?ASSAY?/BIX OR ?IMMUNO?/BIX OR
 ?AGGLUT?/BIX OR ELISA/BIX OR RIA/BIX)
 D TRI 1-3

FILE 'STNGUIDE' ENTERED AT 14:58:14 ON 20 SEP 2005

FILE 'WPIX' ENTERED AT 14:58:44 ON 20 SEP 2005

FILE 'STNGUIDE' ENTERED AT 14:59:18 ON 20 SEP 2005

FILE 'WPIX' ENTERED AT 15:00:55 ON 20 SEP 2005

L53 34679 SEA ABB=ON PLU=ON (A04-A OR B04-C03B OR C04-C03B)/MC

L54 2 SEA ABB=ON PLU=ON L52 AND (L50 OR L53)
 D TRI 1-2

L55 0 SEA ABB=ON PLU=ON L52 AND L5

L56 0 SEA ABB=ON PLU=ON L49 AND L5

L57 32454 SEA ABB=ON PLU=ON G01N033-53?/IPC

L58 67 SEA ABB=ON PLU=ON L40 AND L57

L*** DEL 0 S K40 AND (G01N033-53?/ICM, ICS)

L59 58 SEA ABB=ON PLU=ON L40 AND (G01N033-53?/ICM, ICS)
 D QUE

L60 35 SEA ABB=ON PLU=ON L59 AND ((?ASSAY?/BIX OR ?IMMUNO?/BIX OR
 ?AGGLUT?/BIX OR ELISA/BIX OR RIA/BIX) OR ?COAG?/BIX)

L61 2 SEA ABB=ON PLU=ON L60 AND L50

L62 2 SEA ABB=ON PLU=ON L59 AND L50
 D TRI 1-2
 SAVE TEMP L62 FET502WPI1/A

FILE 'STNGUIDE' ENTERED AT 15:07:37 ON 20 SEP 2005

D SAVED
 D QUE L29

FILE 'HCAPLUS' ENTERED AT 15:08:56 ON 20 SEP 2005

L63 QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR ELISA
 OR RIA OR ?COAG?
 SAVE TEMP L63 FET502QUE1/Q

FILE 'STNGUIDE' ENTERED AT 15:09:24 ON 20 SEP 2005

D SAVED

FILE 'REGISTRY' ENTERED AT 15:10:06 ON 20 SEP 2005

L64 ANALYZE PLU=ON L18 1- LC : 17 TERMS
 D

FILE 'TOXCENTER' ENTERED AT 15:12:10 ON 20 SEP 2005

L65 260 SEA ABB=ON PLU=ON L18

L66 31 SEA ABB=ON PLU=ON L65 AND L63
 SAVE TEMP L66 FET502TOX1/A

FILE 'STNGUIDE' ENTERED AT 15:12:53 ON 20 SEP 2005
 D SAVED

FILE 'MEDLINE' ENTERED AT 15:13:17 ON 20 SEP 2005
 E IMMUNOASSAY/CT
 E E121+ALL
 E AGGLUTINATION/CT
 E E167+ALL

L67 55 SEA ABB=ON PLU=ON L18
 L68 282436 SEA ABB=ON PLU=ON IMMUNOASSAY+PFT,NT/CT
 L69 6576 SEA ABB=ON PLU=ON AGGLUTINATION+PFT,NT/CT
 L70 3 SEA ABB=ON PLU=ON L67 AND (L68 OR L69)
 L71 21 SEA ABB=ON PLU=ON L67 AND L63
 L72 21 SEA ABB=ON PLU=ON (L70 OR L71)
 D TRI 1-21

FILE 'STNGUIDE' ENTERED AT 15:14:56 ON 20 SEP 2005

FILE 'MEDLINE' ENTERED AT 15:16:05 ON 20 SEP 2005
 SAVE TEMP L72 FET502MED1/A

FILE 'STNGUIDE' ENTERED AT 15:16:22 ON 20 SEP 2005
 D SAVED

FILE 'EMBASE' ENTERED AT 15:16:43 ON 20 SEP 2005
 L73 0 SEA ABB=ON PLU=ON L18

FILE 'STNGUIDE' ENTERED AT 15:16:59 ON 20 SEP 2005

FILE 'REGISTRY' ENTERED AT 15:17:59 ON 20 SEP 2005
 D ALL L64
 D L64 1-17

FILE 'EMBASE' ENTERED AT 15:19:37 ON 20 SEP 2005
 SAVE TEMP L73 FET502EMB1/A

FILE 'STNGUIDE' ENTERED AT 15:20:00 ON 20 SEP 2005

FILE 'BIOSIS, CANCERLIT' ENTERED AT 15:20:16 ON 20 SEP 2005
 L74 57 SEA ABB=ON PLU=ON L18
 L75 13 SEA ABB=ON PLU=ON L74 AND L63
 SAVE TEMP L75 FET502MUL1/A
 D SCAN

FILE 'STNGUIDE' ENTERED AT 15:21:38 ON 20 SEP 2005
 D SAVED

FILE 'HCAPLUS, TOXCENTER, WPIX, MEDLINE, BIOSIS, CANCERLIT, EMBASE,
 PASCAL, JICST-EPLUS, DRUGU, BIOTECHNO, BIOTECHDS, SCISEARCH, CONF,
 CONFSCI, DISSABS' ENTERED AT 15:25:01 ON 20 SEP 2005
 L76 1325 SEA ABB=ON PLU=ON SUMIDA, K?/AU
 L77 17872 SEA ABB=ON PLU=ON WADA, K?/AU
 L78 14175 SEA ABB=ON PLU=ON ISHIHARA, K?/AU
 L79 3656 SEA ABB=ON PLU=ON (L76 OR L77 OR L78) AND L63
 L80 12 SEA ABB=ON PLU=ON L79 AND WAKO/CS,SO,PA
 L81 6 DUP REM L80 (6 DUPLICATES REMOVED)
 ANSWERS '1-3' FROM FILE HCAPLUS

ANSWERS '4-5' FROM FILE BIOSIS
ANSWER '6' FROM FILE PASCAL
D SCAN
SAVE TEMP L81 FET502MULINV/A
D SAVED

FILE 'STNGUIDE' ENTERED AT 15:29:29 ON 20 SEP 2005
FILE 'LREGISTRY' ENTERED AT 15:30:14 ON 20 SEP 2005
FILE 'REGISTRY' ENTERED AT 15:30:17 ON 20 SEP 2005
FILE 'ZCAPLUS' ENTERED AT 15:30:20 ON 20 SEP 2005
FILE 'USPATFULL' ENTERED AT 15:30:25 ON 20 SEP 2005
FILE 'USPAT2' ENTERED AT 15:30:29 ON 20 SEP 2005
FILE 'HCAPLUS' ENTERED AT 15:30:32 ON 20 SEP 2005
FILE 'TOXCENTER' ENTERED AT 15:30:36 ON 20 SEP 2005
FILE 'WPIX' ENTERED AT 15:30:39 ON 20 SEP 2005
FILE 'MEDLINE' ENTERED AT 15:30:45 ON 20 SEP 2005
FILE 'BIOSIS' ENTERED AT 15:30:48 ON 20 SEP 2005
FILE 'CANCERLIT' ENTERED AT 15:30:52 ON 20 SEP 2005
FILE 'EMBASE' ENTERED AT 15:30:54 ON 20 SEP 2005
FILE 'PASCAL' ENTERED AT 15:30:58 ON 20 SEP 2005
FILE 'JICST-EPLUS' ENTERED AT 15:31:01 ON 20 SEP 2005
FILE 'DRUGU' ENTERED AT 15:31:04 ON 20 SEP 2005
FILE 'BIOTECHNO' ENTERED AT 15:31:09 ON 20 SEP 2005
FILE 'BIOTECHDS' ENTERED AT 15:31:13 ON 20 SEP 2005
FILE 'SCISEARCH' ENTERED AT 15:31:22 ON 20 SEP 2005
FILE 'CONF' ENTERED AT 15:31:24 ON 20 SEP 2005
FILE 'CONFSCI' ENTERED AT 15:31:29 ON 20 SEP 2005
FILE 'DISSABS' ENTERED AT 15:31:36 ON 20 SEP 2005
FILE 'STNGUIDE' ENTERED AT 15:31:38 ON 20 SEP 2005
D QUE STAT L13
D QUE STAT L18
D L64 1-17
D QUE NOS L33
D QUE NOS L39
D QUE NOS L62
D QUE NOS L66
D QUE NOS L72
D QUE NOS L73

D QUE NOS L75

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS, CANCERLIT'
ENTERED AT 15:33:39 ON 20 SEP 2005

L82 70 DUP REM L33 L39 L62 L66 L72 L73 L75 (23 DUPLICATES REMOVED)
ANSWERS '1-23' FROM FILE HCAPLUS
ANSWERS '24-26' FROM FILE USPATFULL
ANSWER '27' FROM FILE WPIX
ANSWERS '28-57' FROM FILE TOXCENTER
ANSWERS '58-67' FROM FILE MEDLINE
ANSWERS '68-70' FROM FILE BIOSIS

FILE 'STNGUIDE' ENTERED AT 15:34:17 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT
15:34:35 ON 20 SEP 2005
D IBIB ED AB HITIND HITSTR RETABLE

FILE 'STNGUIDE' ENTERED AT 15:34:36 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT
15:34:58 ON 20 SEP 2005
D IBIB ED AB HITIND HITSTR RETABLE 2-23

FILE 'STNGUIDE' ENTERED AT 15:35:09 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT
15:35:41 ON 20 SEP 2005
D IBIB AB HITSTR 24-26

FILE 'STNGUIDE' ENTERED AT 15:35:44 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT
15:36:20 ON 20 SEP 2005
D IALL ABEQ TECH ABEX 27

FILE 'STNGUIDE' ENTERED AT 15:36:23 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT
15:36:55 ON 20 SEP 2005
D IBIB ED AB HITIND 28

FILE 'STNGUIDE' ENTERED AT 15:36:56 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT
15:37:26 ON 20 SEP 2005

FILE 'STNGUIDE' ENTERED AT 15:37:30 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT
15:37:46 ON 20 SEP 2005
D IBIB ED AB HITIND 29-

FILE 'STNGUIDE' ENTERED AT 15:37:53 ON 20 SEP 2005
D QUE L81

FILE 'HCAPLUS, BIOSIS, PASCAL' ENTERED AT 15:39:22 ON 20 SEP 2005
D IBIB ED AB L81 1-6

FILE 'STNGUIDE' ENTERED AT 15:39:24 ON 20 SEP 2005

FILE 'STNGUIDE' ENTERED AT 15:39:41 ON 20 SEP 2005

D QUE STAT L13
D QUE STAT L18
D QUE NOS L33
D QUE NOS L39
D QUE NOS L62
D QUE NOS L66
D QUE NOS L72
D QUE NOS L73
D QUE NOS L75
D QUE NOS L81
D L64 1-17

FILE HOME

FILE STNGUIDE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Sep 16, 2005 (20050916/UP).

FILE HCPLUS

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FILE COVERS 1907 - 20 Sep 2005 VOL 143 ISS 13
FILE LAST UPDATED: 19 Sep 2005 (20050919/ED)

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FILE LAST UPDATED: 19 Sep 2005 (20050919/ED)

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FILE WPIX

FILE LAST UPDATED: 15 SEP 2005 <20050915/UP>
MOST RECENT DERWENT UPDATE: 200559 <200559/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
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>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
[<<<](http://thomsonderwent.com/coverage/latestupdates/)

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GUIDES, PLEASE VISIT:
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>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT
DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX
FIRST VIEW - FILE WPIFV.
FOR FURTHER DETAILS: [<<<](http://www.thomsonderwent.com/dwpifv)

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
PLEASE CHECK:
[FOR DETAILS. <<<](http://thomsonderwent.com/support/dwpiref/reftools/classification/code-rev)

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES: 19 SEP 2005 HIGHEST RN 863478-08-4
DICTIONARY FILE UPDATES: 19 SEP 2005 HIGHEST RN 863478-08-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Structure search iteration limits have been increased. See HELP SLIMITS
for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

FILE LREGISTRY

LREGISTRY IS A STATIC LEARNING FILE

NEW CAS INFORMATION USE POLICIES, ENTER HELP USAGETERMS FOR DETAILS.

FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 15 Sep 2005 (20050915/PD)
 FILE LAST UPDATED: 15 Sep 2005 (20050915/ED)
 HIGHEST GRANTED PATENT NUMBER: US6944881
 HIGHEST APPLICATION PUBLICATION NUMBER: US2005204445
 CA INDEXING IS CURRENT THROUGH 15 Sep 2005 (20050915/UPCA)
 ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 15 Sep 2005 (20050915/PD)
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2005
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
 >>> original, i.e., the earliest published granted patents or <<<
 >>> applications. USPAT2 contains full text of the latest US <<<
 >>> publications, starting in 2001, for the inventions covered in <<<
 >>> USPATFULL. A USPATFULL record contains not only the original <<<
 >>> published document but also a list of any subsequent <<<
 >>> publications. The publication number, patent kind code, and <<<
 >>> publication date for all the US publications for an invention <<<
 >>> are displayed in the PI (Patent Information) field of USPATFULL <<<
 >>> records and may be searched in standard search fields, e.g., /PN, <<<
 >>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<
 >>> through the new cluster USPATALL. Type FILE USPATALL to <<<
 >>> enter this cluster. <<<
 >>> <<<
 >>> Use USPATALL when searching terms such as patent assignees, <<<
 >>> classifications, or claims, that may potentially change from <<<
 >>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE USPAT2

FILE COVERS 2001 TO PUBLICATION DATE: 15 Sep 2005 (20050915/PD)
 FILE LAST UPDATED: 15 Sep 2005 (20050915/ED)
 HIGHEST GRANTED PATENT NUMBER: US2005193552
 HIGHEST APPLICATION PUBLICATION NUMBER: US2005204275
 CA INDEXING IS CURRENT THROUGH 15 Sep 2005 (20050915/UPCA)
 ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 15 Sep 2005 (20050915/PD)
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2005
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2005

USPAT2 is a companion file to USPATFULL. USPAT2 contains full text of the latest US publications, starting in 2001, for the inventions covered in USPATFULL. USPATFULL contains full text of the original published US patents from 1971 to date and the original applications from 2001. In addition, a USPATFULL record for an invention contains a complete list of publications that may be searched in standard search fields, e.g., /PN, /PK, etc.

USPATFULL and USPAT2 can be accessed and searched together through the new cluster USPATALL. Type FILE USPATALL to enter this cluster.

Use USPATALL when searching terms such as patent assignees, classifications, or claims, that may potentially change from the

earliest to the latest publication.

FILE TOXCENTER

FILE COVERS 1907 TO 20 Sep 2005 (20050920/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TOXCENTER has been enhanced with new files segments and search fields. See HELP CONTENT for more information.

TOXCENTER thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary. See <http://www.nlm.nih.gov/mesh/> and http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html for a description of changes.

FILE MEDLINE

FILE LAST UPDATED: 17 SEP 2005 (20050917/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE EMBASE

FILE COVERS 1974 TO 15 Sep 2005 (20050915/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS

FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNS) PRESENT FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 14 September 2005 (20050914/ED)

FILE RELOADED: 19 October 2003.

FILE CANCERLIT

FILE COVERS 1963 TO 15 Nov 2002 (20021115/ED)

On July 28, 2002, CANCERLIT was reloaded. See HELP RLOAD for details.

CANCERLIT thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2002 vocabulary. Enter HELP THESAURUS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE PASCAL
FILE LAST UPDATED: 19 SEP 2005 <20050919/UP>
FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE
IN THE BASIC INDEX (/BI) FIELD <<<

FILE JICST-EPLUS
FILE COVERS 1985 TO 19 SEP 2005 (20050919/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE DRUGU
FILE LAST UPDATED: 20 SEP 2005 <20050920/UP>
>>> DERWENT DRUG FILE (SUBSCRIBER) <<<

>>> FILE COVERS 1983 TO DATE <<<
>>> THESAURUS AVAILABLE IN /CT <<<

FILE BIOTECHNO
FILE LAST UPDATED: 7 JAN 2004 <20040107/UP>
FILE COVERS 1980 TO 2003.

>>> BIOTECHNO IS NO LONGER BEING UPDATED AS OF 2004 <<<

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN /CT AND BASIC INDEX <<<

FILE BIOTECHDS
FILE LAST UPDATED: 14 SEP 2005 <20050914/UP>

>>> USE OF THIS FILE IS LIMITED TO BIOTECH SUBSCRIBERS <<<

>>> NEW CLASSIFICATION SYSTEM FROM 2002 ONWARDS - SEE HELP CLA <<<

>>> NEW DISPLAY FIELDS LS AND LS2 (LEGAL STATUS DATA FROM THE INPADOC DATABASE) AVAILABLE - SEE NEWS <<<

FILE SCISEARCH

FILE COVERS 1974 TO 15 Sep 2005 (20050915/ED)

SCISEARCH has been reloaded, see HELP RLOAD for details.

FILE CONF
FILE LAST UPDATED: 16 SEP 2005 <20050916/UP>
FILE COVERS 1976 TO DATE.

FILE CONFSCI
FILE COVERS 1973 TO 25 May 2005 (20050525/ED)

FILE DISSABS

FILE COVERS 1861 TO 26 AUG 2005 (20050826/ED)

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STRUCTURE FILE UPDATES: 19 SEP 2005 HIGHEST RN 863478-08-4
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New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> fil zcap
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FILE LAST UPDATED: 19 Sep 2005 (20050919/ED)

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=> fil uspatfull
FILE 'USPATFULL' ENTERED AT 15:30:25 ON 20 SEP 2005
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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 15 Sep 2005 (20050915/PD)
FILE LAST UPDATED: 15 Sep 2005 (20050915/ED)
HIGHEST GRANTED PATENT NUMBER: US6944881
HIGHEST APPLICATION PUBLICATION NUMBER: US2005204445
CA INDEXING IS CURRENT THROUGH 15 Sep 2005 (20050915/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 15 Sep 2005 (20050915/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
>>> original, i.e., the earliest published granted patents or <<<
>>> applications. USPAT2 contains full text of the latest US <<<
>>> publications, starting in 2001, for the inventions covered in <<<
>>> USPATFULL. A USPATFULL record contains not only the original <<<
>>> published document but also a list of any subsequent <<<
>>> publications. The publication number, patent kind code, and <<<
>>> publication date for all the US publications for an invention <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<
>>> records and may be searched in standard search fields, e.g., /PN, <<<
>>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<
>>> through the new cluster USPATALL. Type FILE USPATALL to <<<
>>> enter this cluster. <<<
>>> <<<
>>> Use USPATALL when searching terms such as patent assignees, <<<
>>> classifications, or claims, that may potentially change from <<<
>>> the earliest to the latest publication. <<<

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=> fil uspat2
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FILE COVERS 2001 TO PUBLICATION DATE: 20 Sep 2005 (20050920/PD)
FILE LAST UPDATED: 20 Sep 2005 (20050920/ED)
HIGHEST GRANTED PATENT NUMBER: US2005159081
HIGHEST APPLICATION PUBLICATION NUMBER: US2005204275
CA INDEXING IS CURRENT THROUGH 20 Sep 2005 (20050920/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 20 Sep 2005 (20050920/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2005

USPAT2 is a companion file to USPATFULL. USPAT2 contains full text of the latest US publications, starting in 2001, for the inventions covered in USPATFULL. USPATFULL contains full text of the original published US patents from 1971 to date and the original applications from 2001. In addition, a USPATFULL record for an invention contains a complete list of publications that may be searched in standard search fields, e.g., /PN, /PK, etc.

USPATFULL and USPAT2 can be accessed and searched together through the new cluster USPATALL. Type FILE USPATALL to enter this cluster.

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FILE LAST UPDATED: 19 Sep 2005 (20050919/ED)

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```
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TOXCENTER thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary. See <http://www.nlm.nih.gov/mesh/> and http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html for a description of changes.

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MOST RECENT DERWENT UPDATE: 200559 <200559/DW>
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>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT
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FOR FURTHER DETAILS: [<<<](http://www.thomsonderwent.com/dwpifv)

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
PLEASE CHECK:
<http://thomsonderwent.com/support/dwpieref/reftools/classification/code-revision/>
FOR DETAILS. <<<

=> fil medline
FILE 'MEDLINE' ENTERED AT 15:30:45 ON 20 SEP 2005

FILE LAST UPDATED: 17 SEP 2005 (20050917/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP
RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> fil biosis
FILE 'BIOSIS' ENTERED AT 15:30:48 ON 20 SEP 2005
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 14 September 2005 (20050914/ED)

FILE RELOADED: 19 October 2003.

=> fil cancerlit
FILE 'CANCERLIT' ENTERED AT 15:30:52 ON 20 SEP 2005

FILE COVERS 1963 TO 15 Nov 2002 (20021115/ED)

On July 28, 2002, CANCERLIT was reloaded. See HELP RLOAD for details.

CANCERLIT thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2002 vocabulary. Enter HELP THESAURUS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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EMBASE has been reloaded. Enter HELP RLOAD for details.

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=> fil pascal
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FILE LAST UPDATED: 19 SEP 2005 <20050919/UP>
FILE COVERS 1977 TO DATE.

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=> fil jicst
FILE 'JICST-EPLUS' ENTERED AT 15:31:01 ON 20 SEP 2005
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FILE COVERS 1985 TO 19 SEP 2005 (20050919/ED)

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=> fil drugu
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FILE LAST UPDATED: 20 SEP 2005 <20050920/UP>
>>> DERWENT DRUG FILE (SUBSCRIBER) <<<

>>> FILE COVERS 1983 TO DATE <<<
>>> THESAURUS AVAILABLE IN /CT <<<

=> fil biotechno

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FILE COVERS 1980 TO 2003.

>>> BIOTECHNO IS NO LONGER BEING UPDATED AS OF 2004 <<<

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN
/CT AND BASIC INDEX <<<

=> fil biotechds

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>>> NEW CLASSIFICATION SYSTEM FROM 2002 ONWARDS - SEE HELP CLA <<<

>>> NEW DISPLAY FIELDS LS AND LS2 (LEGAL STATUS DATA FROM
THE INPADOC DATABASE) AVAILABLE - SEE NEWS <<<

=> fil scisearch

FILE 'SCISEARCH' ENTERED AT 15:31:22 ON 20 SEP 2005

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SCISEARCH has been reloaded, see HELP RLOAD for details.

=> fil conf

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FILE LAST UPDATED: 16 SEP 2005 <20050916/UP>
FILE COVERS 1976 TO DATE.

=> fil confsci

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=> fil dissabs

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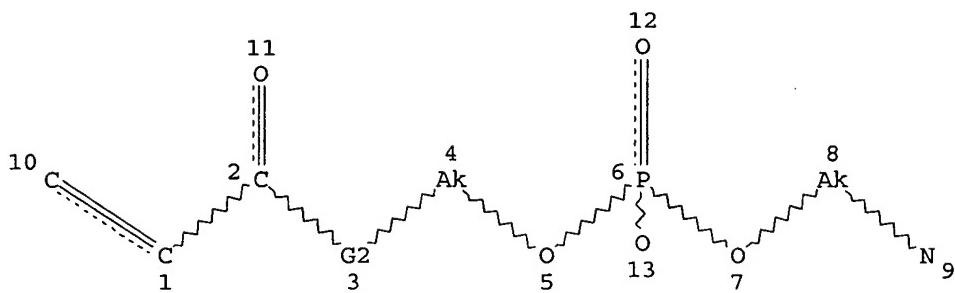
=> file stnguide

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LAST RELOADED: Sep 16, 2005 (20050916/UP).

=> d que stat l13
 L11 STR



VAR G2=O/N
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 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

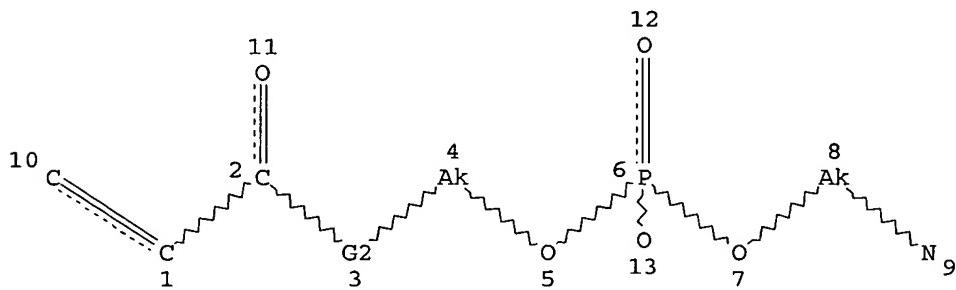
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 NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
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100.0% PROCESSED 56776 ITERATIONS
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832 ANSWERS

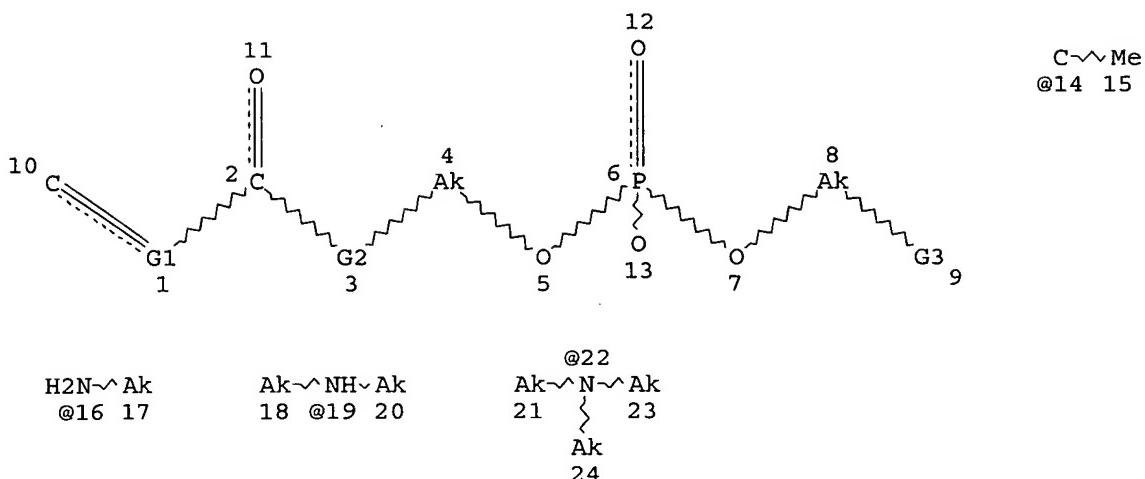
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 L11 STR



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GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
 L13 832 SEA FILE=REGISTRY SSS FUL L11
 L16 STR



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 VAR G2=O/NH
 VAR G3=NH3/16/19/22
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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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STEREO ATTRIBUTES: NONE
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100.0% PROCESSED 832 ITERATIONS 553 ANSWERS
 SEARCH TIME: 00.00.01

=> d 164 1-17
 L64 ANALYZE L18 1- LC : 17 TERMS

TERM #	# OCC	# DOC	% DOC LC
1	535	535	96.75 CA
2	535	535	96.75 CAPLUS
3	255	255	46.11 TOXCENTER
4	115	115	20.80 USPATFULL
5	29	29	5.24 USPAT2
6	3	3	0.54 BIOSIS
7	3	3	0.54 CHEMLIST
8	3	3	0.54 MEDLINE
9	2	2	0.36 CASREACT
10	2	2	0.36 DIOGENES
11	2	2	0.36 IPA
12	2	2	0.36 TSCA
13	1	1	0.18 BIOBUSINESS
14	1	1	0.18 CANCERLIT
15	1	1	0.18 CHEMINFORMRX

16 1 1 0.18 PIRA
 17 1 1 0.18 PROMT
 ***** END OF L64***

=> d que nos 133

L11 STR
 L13 832 SEA FILE=REGISTRY SSS FUL L11
 L16 STR
 L18 553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
 L24 715 SEA FILE=HCAPLUS ABB=ON PLU=ON L18
 L25 56930 SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOASSAY+PFT, NT/CT
 L26 47927 SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS (L)
 IMMUNOASSAY"+PFT, NT/CT
 L27 5294 SEA FILE=HCAPLUS ABB=ON PLU=ON AGGLUTINATION+PFT, NT/CT
 L28 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND (L25 OR L26 OR L27)
 L29 QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
 LISA OR RIA
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 L33 23 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 OR L31

=> d his 139

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 L39 3 S L35 AND L38

=> d que nos 139

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 L16 STR
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 L35 78 SEA L18
 L38 23444 SEA G01N033-5?/IPC
 L39 3 SEA L35 AND L38

=> d que nos 162

L40 2142 SEA FILE=WPIX ABB=ON PLU=ON (B415 (P) B701 (P) B713 (P) B815
 (P) B831 (P) H1 (P) J011)/M0,M1,M2,M3,M4,M5,M6
 L50 408 SEA FILE=WPIX ABB=ON PLU=ON C08F030-02/IPC
 L59 58 SEA FILE=WPIX ABB=ON PLU=ON L40 AND (G01N033-53?/ICM, ICS)
 L62 2 SEA FILE=WPIX ABB=ON PLU=ON L59 AND L50

=> d que nos 166

L11 STR
 L13 832 SEA FILE=REGISTRY SSS FUL L11
 L16 STR
 L18 553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
 L63 QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
 LISA OR RIA OR ?COAG?
 L65 260 SEA FILE=TOXCENTER ABB=ON PLU=ON L18
 L66 31 SEA FILE=TOXCENTER ABB=ON PLU=ON L65 AND L63

=> d que nos 172

L11 STR
 L13 832 SEA FILE=REGISTRY SSS FUL L11
 L16 STR

L18 553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L63 QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
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L67 55 SEA FILE=MEDLINE ABB=ON PLU=ON L18
L68 282436 SEA FILE=MEDLINE ABB=ON PLU=ON IMMUNOASSAY+PFT,NT/CT
L69 6576 SEA FILE=MEDLINE ABB=ON PLU=ON AGGLUTINATION+PFT,NT/CT
L70 3 SEA FILE=MEDLINE ABB=ON PLU=ON L67 AND (L68 OR L69)
L71 21 SEA FILE=MEDLINE ABB=ON PLU=ON L67 AND L63
L72 21 SEA FILE=MEDLINE ABB=ON PLU=ON (L70 OR L71)

=> d que nos 173
L11 STR
L13 832 SEA FILE=REGISTRY SSS FUL L11
L16 STR
L18 553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L73 0 SEA FILE=EMBASE ABB=ON PLU=ON L18

=> d his 175

(FILE 'BIOSIS, CANCERLIT' ENTERED AT 15:20:16 ON 20 SEP 2005)
L75 13 S L74 AND L63

=> d que nos 175
L11 STR
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L16 STR
L18 553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L63 QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
 LISA OR RIA OR ?COAG?
L74 57 SEA L18
L75 13 SEA L74 AND L63

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L73 HAS NO ANSWERS
FILE 'HCAPLUS' ENTERED AT 15:33:39 ON 20 SEP 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE 'WPIX' ENTERED AT 15:33:39 ON 20 SEP 2005
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FILE 'MEDLINE' ENTERED AT 15:33:39 ON 20 SEP 2005

FILE 'BIOSIS' ENTERED AT 15:33:39 ON 20 SEP 2005
Copyright (c) 2005 The Thomson Corporation

FILE 'CANCERLIT' ENTERED AT 15:33:39 ON 20 SEP 2005
PROCESSING COMPLETED FOR L33
PROCESSING COMPLETED FOR L39
PROCESSING COMPLETED FOR L62

PROCESSING COMPLETED FOR L66
PROCESSING COMPLETED FOR L72
PROCESSING COMPLETED FOR L73
PROCESSING COMPLETED FOR L75

L82 70 DUP REM L33 L39 L62 L66 L72 L73 L75 (23 DUPLICATES REMOVED)
ANSWERS '1-23' FROM FILE HCAPLUS
ANSWERS '24-26' FROM FILE USPATFULL
ANSWER '27' FROM FILE WPIX
ANSWERS '28-57' FROM FILE TOXCENTER
ANSWERS '58-67' FROM FILE MEDLINE
ANSWERS '68-70' FROM FILE BIOSIS

=> file stnguide
FILE 'STNGUIDE' ENTERED AT 15:34:17 ON 20 SEP 2005
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Sep 16, 2005 (20050916/UP).

=> d ibib ed ab hitind hitstr retable
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE,
BIOSIS' - CONTINUE? (Y)/N:y

L82 ANSWER 1 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2004:264055 HCAPLUS
DOCUMENT NUMBER: 141:3747
TITLE: Evaluation of 2-methacryloyloxyethyl phosphorylcholine polymeric nanoparticle for immunoassay of C-reactive protein detection
AUTHOR(S): Park, Jongwon; Kurosawa, Shigeru; Watanabe, Junji;
Ishihara, Kazuhiko
CORPORATE SOURCE: Department of Materials Engineering, School of
Engineering, University of Tokyo, Tokyo, Japan
SOURCE: Analytical Chemistry (2004), 76(9), 2649-2655
CODEN: ANCHAM; ISSN: 0003-2700
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 01 Apr 2004
AB To prepare novel 2-methacryloyloxyethyl phosphorylcholine (MPC)-polymeric nanoparticle (MPC-PNP), water-soluble amphiphilic phospholipid polymer, poly [MPC-co-Bu methacrylate (BMA)-co-p-nitrophenyloxycarbonyl poly(ethylene glycol) methacrylate (MEONP) (PMBN)], which has active ester groups for bioconjugation on the side chains, was synthesized. MPC-PNP was prepared by a solvent evaporation technique where the poly(L-lactic acid) was used as core and PMBN was applied as an emulsifier and a surface modifier under systematical design of well-arranged phospholipids polar groups in its surface. Characteristics for MPC-PNP were thoroughly investigated with dynamic light scattering, electrophoresis light scattering, XPS, and field emission SEM measurements. Through a protein adsorption test, the phosphorylcholine group on the surface of MPC-PNPs, which had their active ester groups substituted by glycine, were shown to suppress the nonspecific adsorption of bovine serum albumin. These particles were used for C-reactive protein (CRP) detection, where anti-CRP monoclonal antibodies were immobilized on the MPC-PNP using the active ester group, while the remaining active ester groups were thoroughly reacted with glycine. The detection limit about serum-free CRP in the calibration curve was shown to extend from 0.01 to 10 mg/dL when anti-CRP antibody immobilized MPC-PNP was used for serum-free CRP detection. This compares favorably with measurement using polystyrene nanoparticles that were shown to detect from 0.1 to 10 mg/dL by an immunoagglutination technique. Also, for the detection of CRP in serum, MPC-PNP was shown to give the same calibration curve explained by the efficient suppression of nonspecific binding. Furthermore, denaturation of immobilizing anti-CRP antibody on the MPC-PNP hardly occurred despite increasing the temperature. It is concluded that MPC-PNP is unique due to the design of its interfacial properties, also it will perform well in a diagnostic immunoassay because of its optimized material properties.
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 13, 15
IT Immunoassay
Scanning electron microscopy
(2-methacryloyloxyethyl phosphorylcholine polymeric nanoparticle for immunoassay of C-reactive protein detection)
IT 685901-25-1P
RL: ARU (Analytical role, unclassified); DEV (Device component use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES

(Uses)

(2-methacryloyloxyethyl phosphorylcholine polymeric nanoparticle for immunoassay of C-reactive protein detection)

IT 685901-25-1P

RL: ARU (Analytical role, unclassified); DEV (Device component use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(2-methacryloyloxyethyl phosphorylcholine polymeric nanoparticle for immunoassay of C-reactive protein detection)

RN 685901-25-1 HCAPLUS

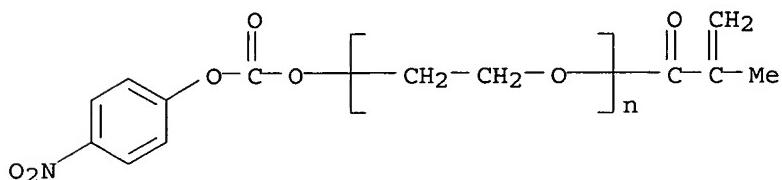
CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate and α -(2-methyl-1-oxo-2-propenyl)- ω -[[[(4-nitrophenoxy)carbonyl]oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 666711-01-9

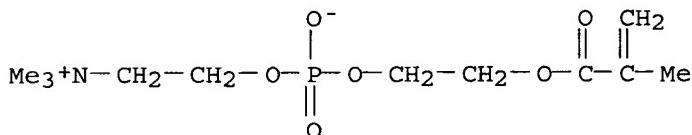
CMF (C₂ H₄ O)_n C₁₁ H₉ N O₆

CCI PMS



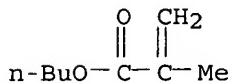
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CRN 67881-98-5

CMF C₁₁ H₂₂ N O₆ P

CM 3

CRN 97-88-1

CMF C₈ H₁₄ O₂

RETABLE

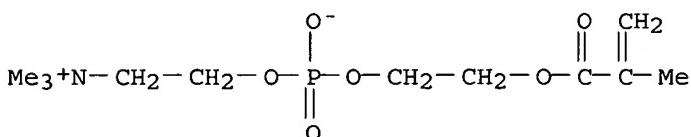
Referenced Author (RAU)	Year (R PY)	VOL (R VL)	PG (R PG)	Referenced Work (RWK)	Referenced File
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Aceti, A	1991	22	135	J Infect	MEDLINE
Akhtar, S	1995	107	209	J Membr Sci	HCAPLUS
Babba, H	1994	50	64	Am J Trop Med	MEDLINE
Bangs, L	1996	69	1873	Pure Appl Chem	
Biasucci, L	1999	99	855	Circulation	MEDLINE
Bundy, J	1999	71	1460	Anal Chem	HCAPLUS
Chen, J	2001	17	369	Biotechnol Prog	HCAPLUS
de Winter, R	1999	42	240	Cardiovasc Res	HCAPLUS
Diamandis, E	1990	194	19	Clin Chim Acta	HCAPLUS
Elvassore, N	2001	40	795	Ind Eng Chem Res	HCAPLUS
Ghouchian, H	1997	41	401	Talanta	
Haverkate, F	1997	349	462	Lancet	MEDLINE
Hayward, J	1984	5	135	Biomaterials	HCAPLUS
Hirsch, L	2003	75	2377	Anal Chem	HCAPLUS
Holownia, P	2001	73	3426	Anal Chem	HCAPLUS
Ishihara, K	1999	10	1047	J Biomater Sci, Poly	HCAPLUS
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCAPLUS
Ishihara, K	1992	26	1543	J Biomed Mater Res	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Ishihara, K	1990	22	355	Polym J	HCAPLUS
Kitano, H	2002	104	10425	J Phys Chem B	
Kitano, H	2003	19	10260	Langmuir	HCAPLUS
Koenig, W	1999	99	237	Circulation	MEDLINE
Kurosawa, S	1990	38	1117	Chem Pharm Bull	HCAPLUS
Lu, D	1991	3	127	J Biomater Sci, Poly	HCAPLUS
Molina-Bolivar, J	2001	17	2514	Langmuir	HCAPLUS
Pentikanen, M	2000	247	359	J Intern Med	
Perez-Amodio, S	2001	73	3417	Anal Chem	HCAPLUS
Ridker, P	1998	97	425	Circulation	MEDLINE
Ruiz, L	1998	19	987	Biomaterials	HCAPLUS
Sakai-Kato, K	2002	74	2943	Anal Chem	HCAPLUS
Sakaki, S	1999	47	523	J Biomed Mater Res	HCAPLUS
Singer, S	1972	175	720	Science	HCAPLUS
Velev, O	1999	15	3693	Langmuir	HCAPLUS
Wang, D	2002	2	857	Nano Lett	HCAPLUS
Wang, J	2001	17	5739	Langmuir	HCAPLUS
Whicher, J	1999	37	495	Clin Chem Lab Med	HCAPLUS

=> d ibib ed ab hitind hitstr retable 2-23
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE,
BIOSIS' - CONTINUE? (Y)/N:y

L82 ANSWER 2 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2004:1004654 HCAPLUS
DOCUMENT NUMBER: 142:370012
TITLE: Evaluation of a high-affinity QCM immunosensor using antibody fragmentation and 2-methacryloyloxyethyl phosphorylcholine (MPC) polymer
AUTHOR(S): Kurosawa, Shigeru; Nakamura, Miki; Park, Jong-Won; Aizawa, Hidenobu; Yamada, Kazunori; Hirata, Mitsuo
CORPORATE SOURCE: National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, 305-8565, Japan
SOURCE: Biosensors & Bioelectronics (2004), 20(6), 1134-1139
CODEN: BBIOE4; ISSN: 0956-5663
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal

LANGUAGE: English
 ED Entered STN: 22 Nov 2004
 AB This study evaluated construction of a high affinity quartz crystal microbalance (QCM) immunosensor using anti-C-reactive protein (CRP) antibody and its fragments for CRP detection. Three types of antibody were immobilized on the surface of a QCM via covalent-bounding. Then affinity was evaluated through antigen-antibody binding between CRP and its antibody. Affinity between antigen-antibody was shown to be highest when anti-CRP F(ab')₂-IgG antibody (70 µg/mL) was immobilized on the QCM. In case of anti-CRP F(ab')₂-IgG antibody, affinity which was attributable to antigen-antibody binding was almost twice that of anti-CRP IgG antibody, which is used conventionally for QCM immunosensors. In addition, when it was treated with 2-methacryloyloxyethyl phosphorylcholine-co-Bu methacrylate, so-called MPC polymer, highly affinitive and selective immunosensing for CRP was achieved without non-specific binding from plasma proteins in human serum. When anti-CRP F(ab')₂-IgG antibody was immobilized on the QCM, the detection limit and the linearity of CRP calibration curve were achieved at concns. from 0.001 to 100 µg/dL even during investigation in serum samples. Exptl. results verified the successful construction of a highly affinitive and selective QCM-immunosensor which was modified with anti-CRP F(ab')₂-IgG antibody and MPC polymer.
 CC 9-1 (Biochemical Methods)
 IT 67881-98-5, 2-Methacryloyloxyethyl phosphorylcholine
 RL: TEM (Technical or engineered material use); USES (Uses)
 (evaluation of a high-affinity QCM **immunosensor** using
 antibody fragmentation and 2-methacryloyloxyethyl phosphorylcholine
 (MPC) polymer)
 IT 67881-98-5, 2-Methacryloyloxyethyl phosphorylcholine
 RL: TEM (Technical or engineered material use); USES (Uses)
 (evaluation of a high-affinity QCM **immunosensor** using
 antibody fragmentation and 2-methacryloyloxyethyl phosphorylcholine
 (MPC) polymer)
 RN 67881-98-5 HCPLUS
 CN 3,5,8-Trioxa-4-phosphoanodec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Abad, J	1998	70	2848	Anal Chem	HCAPLUS
Aizawa, H	2001	76	173	Sens Actuat B	
Borgue, L	2000	46	1839	Clin Chem	
Bunde, R	1998	46	1223	Talanta	HCAPLUS
Chou, S	2002	48	913	Clin Chem	HCAPLUS
Haverkate, F	1997	349	462	Lancet	MEDLINE
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Ishihara, K	2000	1	131	Sci Technol Adv Mat	HCAPLUS
Kanai, I	1998			CRP (C-reactive prot	
Koenig, W	1999	99	237	Circulation	MEDLINE

Kurosawa, S	1990	38	1117	Chem Pharm Bull	HCAPLUS
Kurosawa, S	2000	47	1256	IEEE Trans UFFC	
Kurosawa, S	2003	14	1882	Meas Sci Technol	HCAPLUS
Ledue, T	1998	35	745	Annu Clin Biochem	HCAPLUS
Morgan, C	1996	42	193	Clin Chem	HCAPLUS
Muratsugu, M	1993	65	2933	Anal Chem	HCAPLUS
Muratsugu, M	1997	1	99	Colloid Interface Sc	HCAPLUS
Park, J	2003	50	193	IEEE Trans UFFC	
Park, J	2003	91	158	Sens Actuat B	
Pentikanen, M	2000	247	359	J Intern Med	
Ridker, P	1998	97	425	Circulation	MEDLINE
Ridker, P	1997	336	973	N Engl J Med	HCAPLUS
Rifai, N	1999	45	2136	Clin Chem	HCAPLUS
Sakai, G	1995	24-25	134	Sens Actuat B	
Storri, S	1998	13	347	Biosens Bioelectron	HCAPLUS
Thompson, M	1986	58	1206	Anal Chem	HCAPLUS
Uttenthaler, E	2001	16	735	Biosen Bioelectron	HCAPLUS
Whicher, J	1999	37	495	Clin Chem Lab Med	HCAPLUS
Wood, W	2000	46	131	Clin Lab	HCAPLUS
Xia, C	1996	336	185	Anal Chim Acta	

L82 ANSWER 3 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4

ACCESSION NUMBER: 2005:4348 HCAPLUS

DOCUMENT NUMBER: 142:296317

TITLE: Cytokine Adsorptive Property of Various Adsorbents in Immunoabsorption Columns and a Newly Developed Adsorbent: An in vitro Study

AUTHOR(S): Oda, Shigeto; Hirasawa, Hiroyuki; Shiga, Hidetoshi; Nakanishi, Kazuya; Matsuda, Ken-ichi; Nakamura, Masataka; Ikeda, Hiroyuki; Sakai, Masamune

CORPORATE SOURCE: Department of Emergency and Critical Care Medicine, Graduate School of Medicine, Chiba University, Chiba, Japan

SOURCE: Blood Purification (2004), 22(6), 530-536

CODEN: BLPUDO; ISSN: 0253-5068

PUBLISHER: S. Karger AG

DOCUMENT TYPE: Journal

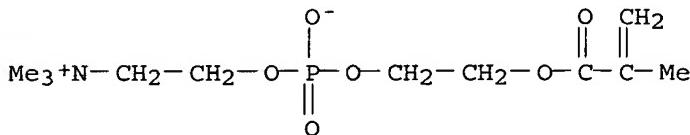
LANGUAGE: English

ED Entered STN: 04 Jan 2005

AB Background/Aims: Cytokines play important roles in the pathophysiol. of systemic inflammatory response syndrome (SIRS) and sepsis. Therefore, some effective measures to remove cytokines from the bloodstream could be effective in the treatment of SIRS and sepsis. The aim of this study was to evaluate the cytokine adsorptive property of various adsorbents for the purpose of the development of new selective cytokine adsorption columns. Methods: The cytokine adsorptive property of adsorbent in a CF-X column, which consists of cellulose beads cross-linked with hexamethylene-di-isocyanate, was compared with those of various adsorbents in currently available immunoabsorption columns, such as Immusorba TR, Immusorba PH, Selesorb, and Lixelle, in vitro batchwise test using patients' plasma. A newly developed adsorbent, MPCF-X, which was modified by coating the surface of the adsorbent in CF-X with 2-methacryloyloxyethyl phosphorylcholine (MPC), was also tested for its cytokine adsorptive property. Results: The adsorbent in CF-X showed a significantly higher adsorption rate for TNF- α , interleukin (IL)-6 and IL-10 compared with other adsorbents. Adsorbent in Lixelle showed good affinity to TNF- α and IL-8. Especially, the adsorbent in CF-X almost completely removed TNF- α , whereas it also had considerable affinity to normal IgG. MPCF-X showed decreased affinity to IgG with considerable adsorptive properties to cytokines. Conclusion: Selective cytokine adsorption

columns could be developed with improvement of currently available adsorbents. Such a new selective cytokine adsorption column could be clin. applied for the treatment of SIRS/sepsis.

- CC 15-1 (Immunochemistry)
 Section cross-reference(s): 14
 IT 67881-98-5, 2-Methacryloyloxyethyl phosphorylcholine
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (cytokine adsorption by various adsorbents in immunoadsorption columns in treatment of sepsis)
 IT 67881-98-5, 2-Methacryloyloxyethyl phosphorylcholine
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (cytokine adsorption by various adsorbents in immunoadsorption columns in treatment of sepsis)
 RN 67881-98-5 HCPLUS
 CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (R PY)	VOL (R VL)	PG (R PG)	Referenced Work (RWK)	Referenced File
Bellomo, R	1993	21	522	Crit Care Med	MEDLINE
Cain, B	1998	186	337	J Am Coll Surg	MEDLINE
Cole, L	2001	27	978	Intensive Care Med	MEDLINE
De Vries, A	1999	10	846	J Am Soc Nephrol	MEDLINE
Dinarello, C	1993	269	1829	JAMA	MEDLINE
Heering, P	2003	26	128	Kidney Blood Press R	MEDLINE
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCPLUS
Kutsuki, H	1998	2	18	Ther Apher	HCPLUS
Matsuda, K	2001	5	306	Ther Apher	HCPLUS
McMaster, P	2003	4	2	Pediatr Crit Care Me	
Members of American Col	1992	20	864	Crit Care Med	
Nakaji, S	2001	5	301	Ther Apher	HCPLUS
Oda, S	2002	6	193	Ther Apher	
O'Reilly, M	1999	12	411	Shock	MEDLINE
Ronco, C	2002	30	1250	Crit Care Med	
Ronco, C	2000	76	148	Kidney Int	
Shapiro, L	1993	1	13	New Horiz	MEDLINE
Shetz, M	1995	21	169	Intensive Care Med	
Stegmayr, B	2000	18	149	Blood Purif	MEDLINE
Suzuki, K	2003	7	104	Ther Apher	
Tomyo, M	1996	15	118	Jpn J Apheresis	
Tsuchida, K	2002	10	485	Int J Mol Med	HCPLUS
Wheeler, A	1999	340	207	N Engl J Med	MEDLINE
Winchester, J	2003	21	79	Blood Purif	HCPLUS
Winchester, J	2002	137	170	Contrib Nephrol	
Yagihashi, A	2002	6	358	Ther Apher	HCPLUS
Yoshida, M	1998	2	185	Ther Apher	HCPLUS

L82 ANSWER 4 OF 70 HCPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6

ACCESSION NUMBER: 2003:945791 HCPLUS

DOCUMENT NUMBER: 140:14529

TITLE: Developing solvent, measuring method, and kit for immunochromatography

INVENTOR(S): Mochizuki, Takeshi; Komatsu, Mariko; Sakaki, Shujiro

PATENT ASSIGNEE(S): Taunzu K. K., Japan; NOF Corporation

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003344406	A2	20031203	JP 2002-150996	20020524
			JP 2002-150996	20020524

PRIORITY APPLN. INFO.:

ED Entered STN: 04 Dec 2003

AB An improved developing solvent for an immunochromatog. is provided, with which non-specific aggregation and non-specific reaction upon measurements are prevented, and the measurements are performed with high accuracy. The developing solvent for an immunochromatog. is characterized in that it comprises a buffer containing a polymer possessing phosphorylcholine groups. It is preferable that the polymer is contained in the concentration of 0.005-0.3w/v%, and its number average mol. weight is higher than 40,000. The polymer preferably contains 2-methacryloyloxyethylphosphorylcholine as the constituting monomer, and it can be either a homopolymer or a copolymer.

IC ICM G01N033-543
ICS G01N033-531

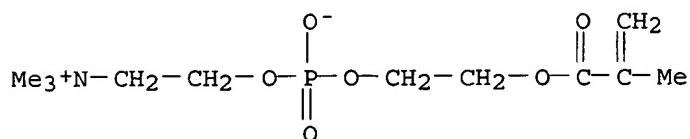
CC 9-10 (Biochemical Methods)

IT 9005-64-5, Tween 20 26628-22-8, Sodium azide 67881-98-5D,
2-Methacryloyloxyethylphosphorylcholine, copolymer with
methoxypolyethyleneglycolmonomethacrylate, copolymer with methacrylate
67881-98-5D, 2-Methacryloyloxyethylphosphorylcholine, homopolymer
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(improved developing solvent, measuring method, and kit for
immunochromatog.)

IT 79-10-7, Acrylic acid, reactions 79-41-4, Methacrylic acid, reactions
25249-16-5, Polyethyleneglycolmonomethacrylate 26403-58-7,
Polyethyleneglycolmonoacrylate 26915-72-0, Methoxypolyethyleneglycolmono
methacrylate 32171-39-4 67881-98-5, 2-
Methacryloyloxyethylphosphorylcholine 150120-15-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(improved developing solvent, measuring method, and kit for
immunochromatog.)

IT 67881-98-5D, 2-Methacryloyloxyethylphosphorylcholine, copolymer
with methoxypolyethyleneglycolmonomethacrylate, copolymer with
methacrylate
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(improved developing solvent, measuring method, and kit for
immunochromatog.)

RN 67881-98-5 HCPLUS

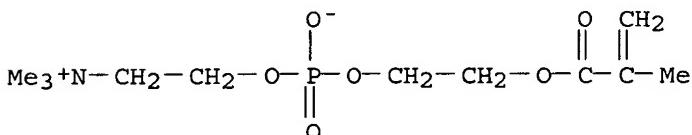
CN 3,5,8-Trioxa-4-phosphhaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-
tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

IT 67881-98-5, 2-Methacryloyloxyethylphosphorylcholine
150120-15-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(improved developing solvent, measuring method, and kit for
immunochromatog.)

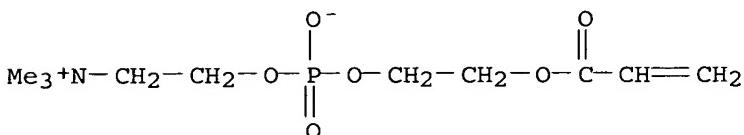
RN 67881-98-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 150120-15-3 HCPLUS

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L82 ANSWER 5 OF 70 HCPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8

ACCESSION NUMBER: 2002:958988 HCPLUS

DOCUMENT NUMBER: 138:21783

TITLE: Agglutination-promoting agent for antigen or antibody immunoassay

INVENTOR(S): Kakuta, Kyoichi; Wada, Hiroshi; Ishihara, Kazuhiko

PATENT ASSIGNEE(S): Wako Pure Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

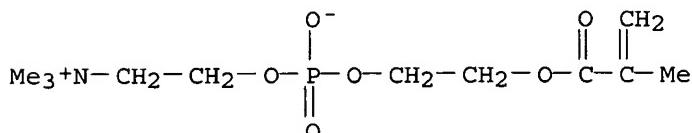
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002365296	A2	20021218	JP 2001-169051	20010605
US 2004157276	A1	20040812	US 2004-626502	20040304
PRIORITY APPLN. INFO.:			JP 2001-169051	A 20010605

ED Entered STN: 18 Dec 2002

AB Provided are aggregation-promoting compds. for use in agglutination immunoassay. These compds are branched polymers or copolymers having basic (monomer) structure of OPO₂-O-R₄-N(R₁R₂R₃) where R₁₋₃ are independently H, OH or alkyl group; and R₄ is an alkyl group or alkylene group. The agglutination immunoassay reagent comprises carrier- or latex-immobilized antibody or antigen. The agglutination immunoassay is useful for determination of antigen or antibody, e.g. C-reactive protein, rheumatic factor and prostate-specific antigen.

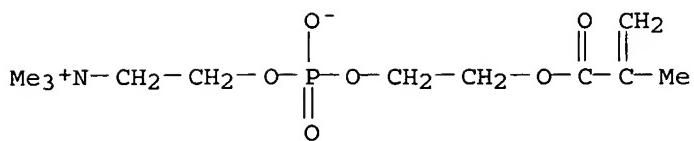
IC ICM G01N033-531

ICS C08F030-02; G01N033-543
 CC 9-10 (Biochemical Methods)
 Section cross-reference(s): 15
 IT **Immunoassay**
 (agglutination test; agglutination-promoting agent for antigen or antibody immunoassay)
 IT **Agglutination**
 (promoters; agglutination-promoting agent for antigen or antibody immunoassay)
 IT 67881-99-6P, Poly-2-methacryloyloxyethylphosphorylcholine
 125275-25-4P, n-Butyl methacrylate-2-Methacryloyloxyethylphosphorylcholine copolymer 144514-08-9P, Stearyl methacrylate-2-Methacryloyloxyethylphosphorylcholine copolymer 313216-64-7P
 478015-82-6P
 RL: ARU (Analytical role, unclassified); DGN (Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (agglutination-promoting agent for antigen or antibody immunoassay)
 IT 67881-99-6P, Poly-2-methacryloyloxyethylphosphorylcholine
 125275-25-4P, n-Butyl methacrylate-2-Methacryloyloxyethylphosphorylcholine copolymer 144514-08-9P, Stearyl methacrylate-2-Methacryloyloxyethylphosphorylcholine copolymer 313216-64-7P
 478015-82-6P
 RL: ARU (Analytical role, unclassified); DGN (Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (agglutination-promoting agent for antigen or antibody immunoassay)
 RN 67881-99-6 HCPLUS
 CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 67881-98-5
 CMF C11 H22 N O6 P

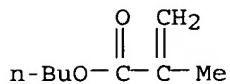


RN 125275-25-4 HCPLUS
 CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1
 CRN 67881-98-5
 CMF C11 H22 N O6 P

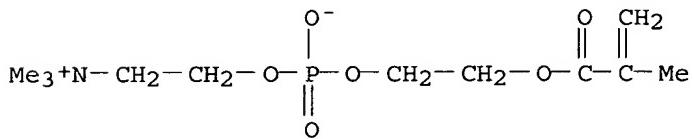


CM 2

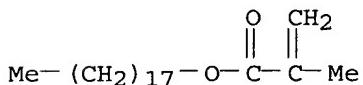
CRN 97-88-1
CMF C8 H14 O2

RN 144514-08-9 HCAPLUS
 CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with octadecyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P

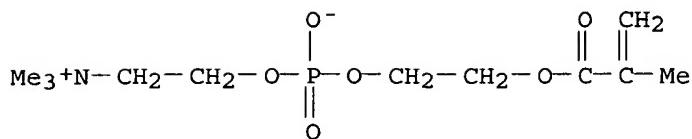
CM 2

CRN 32360-05-7
CMF C22 H42 O2

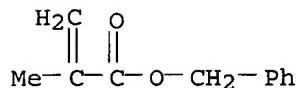
RN 313216-64-7 HCAPLUS
 CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P

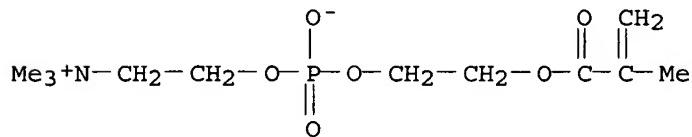


CM 2

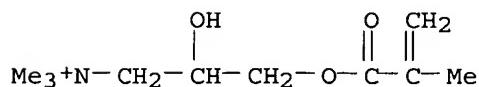
CRN 2495-37-6
CMF C11 H12 O2

RN 478015-82-6 HCAPLUS
 CN 3,5,8-Trioxa-4-phosphoanodec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-hydroxy-N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)oxy]-1-propanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P

CM 2

CRN 13052-11-4
CMF C10 H20 N O3 . Cl● Cl⁻

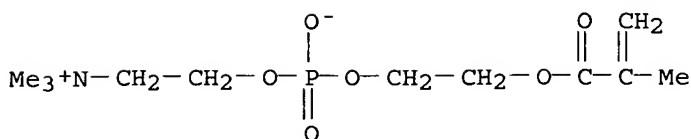
L82 ANSWER 6 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15
 ACCESSION NUMBER: 1999:680723 HCAPLUS
 DOCUMENT NUMBER: 132:32839

TITLE: Stabilization of an antibody conjugated with enzyme by
 2-methacryloyloxyethyl phosphorylcholine copolymer in
 enzyme-linked immunosorbent assay
 AUTHOR(S): Sakaki, Shujiro; Nakabayashi, Nobuo; Ishihara,
 Kazuhiko
 CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo
 Medical and Dental University, Tokyo, 101-0062, Japan
 SOURCE: Journal of Biomedical Materials Research (1999),
 47(4), 523-528
 CODEN: JBMRBG; ISSN: 0021-9304
 PUBLISHER: John Wiley & Sons, Inc.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 27 Oct 1999
 AB The purpose of this study was to develop a novel synthetic stabilizer of
 enzyme-linked antibody in the ELISA. The water-soluble amphiphilic
 phospholipid polymer, poly[2-methacryloyloxyethyl phosphorylcholine
 (MPC)-co-styrene (St)] was synthesized, and its stabilizing functions for
 the antibody were compared with conventional stabilizers of the antibody
 conjugated with enzyme (enzyme-antibody conjugate), such as bovine serum
 albumin (BSA) and casein. In the absence of the stabilizer, the remaining
 immunol. activity decreased to about 10% of its initial value after 37
 days. The same tendency was observed even when the enzyme-antibody conjugate
 in 1.0 wt % BSA solution was used as a stabilizer. In 1.0 wt % casein
 solution,
 the immunol. activity decreased to 29% of the initial value after 37 days.
 On the other hand, in 0.1 wt % and 1.0 wt % poly(MPC-co-St) solution, the
 activity remained 74% and 92% of the initial value, resp. The effects of
 poly(MPC-co-St) on the stabilization of the enzyme-antibody conjugate
 depended on the concentration of poly(MPC-co-St). During the ELISA procedure,
 not only did poly(MPC-co-St) have no effect on the reaction between the
 antigen and the antibody, but it also had no effect on the reaction
 between the enzyme and the substrate. These results indicate that
 poly(MPC-co-St) has the ability to suppress the denaturation of protein,
 enzyme, and antibody. We concluded that water-soluble poly(MPC-co-St) is an
 effective synthetic stabilizer in the ELISA.
 CC 9-10 (Biochemical Methods)
 IT Immunoassay
 (enzyme-linked immunosorbent assay; stabilization of an antibody
 conjugated with enzyme by 2-methacryloyloxyethyl phosphorylcholine
 copolymer in ELISA)
 IT 134483-35-5
 RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use);
 ANST (Analytical study); USES (Uses)
 (stabilization of an antibody conjugated with enzyme by
 2-methacryloyloxyethyl phosphorylcholine copolymer in ELISA)
 IT 134483-35-5
 RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use);
 ANST (Analytical study); USES (Uses)
 (stabilization of an antibody conjugated with enzyme by
 2-methacryloyloxyethyl phosphorylcholine copolymer in ELISA)
 RN 134483-35-5 HCAPLUS
 CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-
 tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI)
 (CA INDEX NAME)

CM 1

CRN 67881-98-5

CMF C11 H22 N O6 P



CM 2

CRN 100-42-5
CMF C8 H8 $\text{H}_2\text{C}\equiv\text{CH}-\text{Ph}$

RETABLE

Referenced Author (RAU)	Year (R PY)	VOL (R VL)	PG (R PG)	Referenced Work (RWK)	Referenced File
Anderton, B	1980	2	122	Immunol Today	
Donovan, J	1975	250	1966	J Biol Chem	HCAPLUS
Farr, A	1981	47	129	J Immunol Meth	HCAPLUS
Ghosh, S	1974	337	395	Biochem Biophys Acta	HCAPLUS
Ikemi, M	1982	15	281	Macromolecules	HCAPLUS
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Ishihara, K	1994	32	859	J Polym Sci Polym Ch	HCAPLUS
Ishihara, K	1990	22	355	Polym J	HCAPLUS
Ishikawa, E	1987	1	238	J Clin Lab Anal	HCAPLUS
Kojima, M	1991	12	121	Biomaterials	HCAPLUS
Naik, D	1975	47	267	Anal Biochem	HCAPLUS
Orci, L	1985	28	528	Diabetologia	HCAPLUS
Osborn, M	1978	77	R27	J Cell Biol	MEDLINE
Sakaki, S	1997		167	Advances in polymeri	
Shaw, D	1980			Introduction to coll	
Wisdom, G	1976	22	1243	Clin Chem	HCAPLUS

L82 ANSWER 7 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:300694 HCAPLUS

DOCUMENT NUMBER: 142:351673

TITLE: Automated analytical method and apparatus

INVENTOR(S): Kurosawa, Shigeru; Aizawa, Hidenobu

PATENT ASSIGNEE(S): National Institute of Advanced Industrial Science and Technology, Japan

SOURCE: PCT Int. Appl., 108 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005031316	A1	20050407	WO 2004-JP14664	20040929
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,				

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

PRIORITY APPLN. INFO.: JP 2003-338604 A 20030929

ED Entered STN: 07 Apr 2005

AB An automated anal. method is provided, which comprises making a sample in a container absorbed to a probe, dispensing the sample from the probe to a sensor part equipped with a piezoelec. element for converting the mass change on the sensor into an elec. change such as a basic resonant frequency and quantitating it, performing at least once making the dispensed sample reabsorbed to the probe and re-dispensing the reabsorbed sample to the sensor part, and thereby, promoting the progress of a chemical reaction or else generated on the sensor. Also provided is an automated anal. apparatus used for this method. Diagrams describing the apparatus assembly

are given.

IC ICM G01N005-02

ICS G01N001-00; G01N033-543; G01N035-02

CC 9-1 (Biochemical Methods)

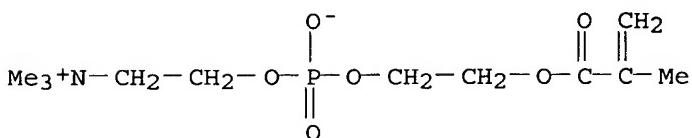
IT Immunoassay
 (sandwich reaction; automated anal. method using apparatus equipped with piezoelec. element)

IT 56-81-5, Glycerol, analysis 67881-98-5D, 2-
 Methacryloyloxyethylphosphorylcholine, polymer 658045-21-7, BlockAce
 658051-44-6, StabilGuard
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (automated anal. method using apparatus equipped with piezoelec. element)

IT 67881-98-5D, 2-Methacryloyloxyethylphosphorylcholine, polymer
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (automated anal. method using apparatus equipped with piezoelec. element)

RN 67881-98-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (R PY)	VOL (R VL)	PG (R PG)	Referenced Work (RWK)	Referenced File
Aizawa, K	2003		202	Dai 42 Kai Japan Oil	
Beckman Instruments Inc	1999			JP 11-502937 A	
Beckman Instruments Inc	1999			US 2002182117 A1	HCAPLUS
Beckman Instruments Inc	1999			EP 819256 A1	HCAPLUS
Beckman Instruments Inc	1999			AU 9715304 A	HCAPLUS
Beckman Instruments Inc	1999			WO 9726536 A1	HCAPLUS
Koyama, N	2000			JP 2000283905 A	HCAPLUS
Nakamura, K	2002	18	46	Chemical Sensors, Th	

Olympus Optical Co Ltd	1983		JP 58-196461 A	
Toshiba Corp	1993		JP 05-285000 A	HCAPLUS
Totsuka, K	2002	18	Chemical Sensors, Th	
Yase, T	2003	73	Sogo Kenkyu Project	

L82 /ANSWER 8 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:591492 HCAPLUS

DOCUMENT NUMBER: 143:93600

TITLE: Blood-group antibody measurement/identification instrument tool, and method

INVENTOR(S): Ito, Yoshihiro; Yamauchi, Tetsuya; Ishikawa, Yoshihide; Uchikawa, Makoto

PATENT ASSIGNEE(S): Kanagawa Academy of Science and Technology, Japan; Japanese Red Cross Society

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005181154	A2	20050707	JP 2003-423771	20031219
PRIORITY APPLN. INFO.:			JP 2003-423771	20031219

ED Entered STN: 08 Jul 2005

AB A blood-group antibody measurement/identification instrument tool is provided, with which the quant. measurement of a blood-group antibody is feasible with the less required quantity of panel blood cells than the traditional blood-group plate without requiring a mech. operation such as centrifugation or else. Also provided is a blood-group antibody measurement/identification method using this instrument tool. The instrument tool is constituted by resp. immobilizing multiple kinds of panel blood cells to a different region on a base body through an immobilization agent consisting of a zwitterionic water-soluble polymer or nonionic water-soluble polymer possessing at least two photo-reactive groups in a mol.

IC ICM G01N033-53

ICS C08F220-36; C08F220-60; C12M001-34; G01N021-76; G01N033-543; G01N033-547

CC 9-10 (Biochemical Methods)

IT Immunoassay

(blood-group antibody measurement tool using panel blood cells immobilized through photo-reactive water-soluble polymer immobilization agent)

IT Immunoassay

(chemiluminescence, enhanced; blood-group antibody measurement tool using panel blood cells immobilized through photo-reactive water-soluble polymer immobilization agent)

IT 6066-82-6, N-Hydroxysuccinimide 6427-66-3, 4-Azido-benzoic acid

14860-64-1, 4-Azido-aniline 18358-13-9, Methacrylate, reactions

25322-68-3, Polyethyleneglycol 34901-14-9 39927-08-7,

Poly(ethyleneglycol)bis(carboxymethyl)ether 67881-98-5,

2-Methacryloyloxyethylphosphorylcholine 67881-98-5D,

2-Methacryloyloxyethylphosphorylcholine, copolymer with photo-reactive

methacrylamide derivative 88539-10-0 150120-15-3

158760-93-1 163801-79-4 179637-06-0

179953-15-2 857051-80-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(blood-group antibody measurement tool using panel blood cells

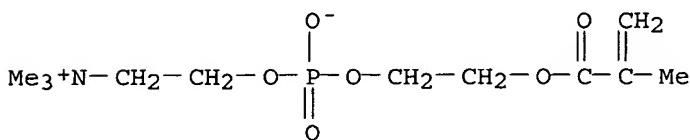
immobilized through photo-reactive water-soluble polymer immobilization agent)

IT 67881-98-5, 2-Methacryloyloxyethylphosphorylcholine
 67881-98-5D, 2-Methacryloyloxyethylphosphorylcholine, copolymer with photo-reactive methacrylamide derivative 88539-10-0
 150120-15-3 158760-93-1 179637-06-0
 179953-15-2

RL: RCT (Reactant); RACT (Reactant or reagent)
 (blood-group antibody measurement tool using panel blood cells immobilized through photo-reactive water-soluble polymer immobilization agent)

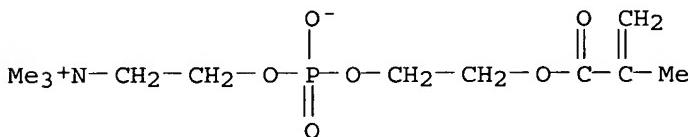
RN 67881-98-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



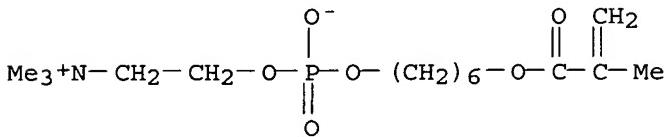
RN 67881-98-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



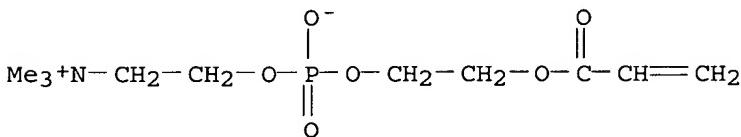
RN 88539-10-0 HCPLUS

CN 3,5,12-Trioxa-4-phosphapentadec-14-en-1-aminium, 4-hydroxy-N,N,N,14-tetramethyl-13-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



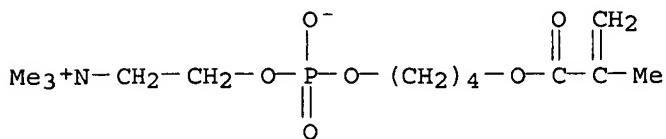
RN 150120-15-3 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



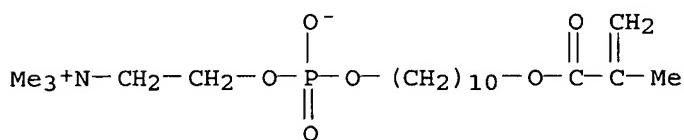
RN 158760-93-1 HCPLUS

CN 3,5,10-Trioxa-4-phosphatridec-12-en-1-aminium, 4-hydroxy-N,N,N,12-tetramethyl-11-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



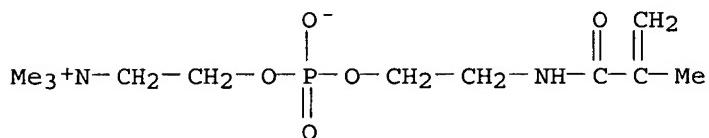
RN 179637-06-0 HCAPLUS

CN 3,5,16-Trioxa-4-phosphonadec-18-en-1-aminium, 4-hydroxy-N,N,N,18-tetramethyl-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 179953-15-2 HCAPLUS

CN 3,5-Dioxa-8-aza-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L82 ANSWER 9 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:299600 HCAPLUS

DOCUMENT NUMBER: 142:353877

TITLE: Antigen or antibody determination in body fluid with rapid, simple and highly sensitive immunoassay

INVENTOR(S): Ishihara, Kazuhiko; Watanabe, Junji; Kurosawa, Shigeru

PATENT ASSIGNEE(S): National Institute of Advanced Industrial Science and Technology, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005091236	A2	20050407	JP 2003-326829	20030918

PRIORITY APPLN. INFO.: JP 2003-326829 20030918

ED Entered STN: 07 Apr 2005

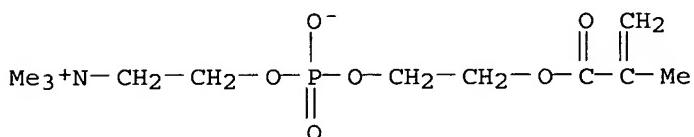
AB Disclosed is a rapid, simple and highly sensitive immunoassay method for detecting antigen and antibody in body fluid. The immunoassay uses polymeric particles or nanoparticles comprising alkyl, hydroxy and aromatic side chain for antigen or antibody immobilization to preserve binding

activity and to reduce nonspecific binding by contaminant proteins. In example, the polymeric nanoparticles were prepared with 2-methacryloyloxyethylphosphorylcholine and Bu methacrylate. The polymeric nanoparticle-immobilized monoclonal antibodies were used for agglutination immunoassay of human C-reactive protein in blood serum.

- IC ICM G01N033-543
 CC 15-2 (Immunochemistry)
 Section cross-reference(s) : 9
 IT Immunoassay
 (agglutination test; antigen determination in body fluid with immunoassay comprising polymeric nanoparticle-immobilized antibody)
 IT 125275-25-4P, 2-Methacryloyloxyethylphosphorylcholine-butyl methacrylate copolymer
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (aggregation determination in body fluid with immunoassay comprising polymeric nanoparticle-immobilized antibody)
 IT 125275-25-4P, 2-Methacryloyloxyethylphosphorylcholine-butyl methacrylate copolymer
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (aggregation determination in body fluid with immunoassay comprising polymeric nanoparticle-immobilized antibody)
- RN 125275-25-4 HCPLUS
 CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

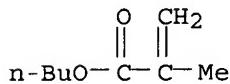
CM 1

CRN 67881-98-5
 CMF C11 H22 N O6 P



CM 2

CRN 97-88-1
 CMF C8 H14 O2



DOCUMENT NUMBER: 141:346148
 TITLE: Substance immobilization agent, and substance immobilization method/substrate using agent
 INVENTOR(S): Yamauchi, Tetsuya; Ito, Yoshihiro; Hasuda, Hirokazu; Konno, Tomohiro; Ishihara, Kazuhiko
 PATENT ASSIGNEE(S): Kanagawa Academy of Science and Technology, Japan
 SOURCE: PCT Int. Appl., 32 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004088319	A1	20041014	WO 2004-JP4510	20040330
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: JP 2003-93834 A 20030331
 JP 2003-346560 A 20031006

ED Entered STN: 18 Oct 2004
 AB A substance immobilization agent is disclosed, which is capable of immobilizing various substances to be immobilized to a substrate by covalent bond, and is highly effective in preventing non-specific adsorption. The agent comprises a polymer having phosphorylcholine groups and multiple photoreactive groups (e.g., azido groups) in a single mol. The polymer binds through the photoreactive groups with a substrate and a substance to be immobilized, whereby the substance to be immobilized is bonded to the substrate through the polymer by a covalent bond. Furthermore, non-specific adsorption is effectively prevented by the phosphorylcholine groups. Also provided is an immobilization agent, which is used for immobilizing a desired substance to a substrate and comprises a nonionic water-soluble polymer having at least two photoreactive groups in a single mol.
 IC ICM G01N033-547
 ICS G01N033-53; C12M001-40; C12M001-34
 CC 9-16 (Biochemical Methods)
 IT Immunoassay
 (chemiluminescence; substance immobilization agent consisting of polymer with photoreactive groups, and use in substance immobilization method/substrate)
 IT Immunoassay
 (fluorescence; substance immobilization agent consisting of polymer with photoreactive groups, and use in substance immobilization method/substrate)
 IT 106-91-2, Glycidylmethacrylate 814-68-6, Acrylic acid chloride 6066-82-6, N-Hydroxysuccinimide 6427-66-3, 4-Azidobenzoic acid 14860-64-1, 4-Azidoaniline 18358-13-9, Methacrylate, reactions 25322-68-3, Polyethyleneglycol 38862-24-7 67881-98-5, 2-Methacryloyloxyethylphosphorylcholine 88539-10-0
 150120-15-3 158760-93-1 163674-39-3 163801-79-4

179637-06-0 179953-15-2

RL: RCT (Reactant); RACT (Reactant or reagent)
 (substance immobilization agent consisting of polymer with photoreactive groups, and use in substance immobilization method/substrate)

IT 67881-98-5, 2-Methacryloyloxyethylphosphorylcholine

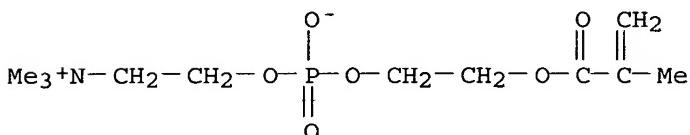
88539-10-0 150120-15-3 158760-93-1

179637-06-0 179953-15-2

RL: RCT (Reactant); RACT (Reactant or reagent)
 (substance immobilization agent consisting of polymer with photoreactive groups, and use in substance immobilization method/substrate)

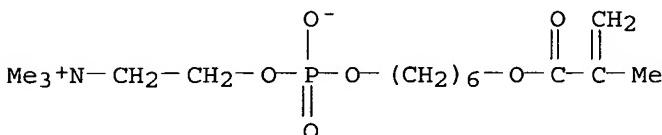
RN 67881-98-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



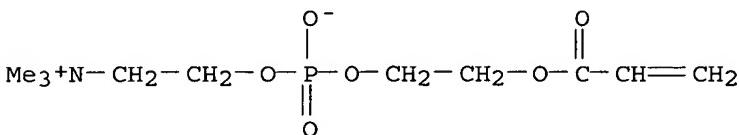
RN 88539-10-0 HCPLUS

CN 3,5,12-Trioxa-4-phosphapentadec-14-en-1-aminium, 4-hydroxy-N,N,N,14-tetramethyl-13-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



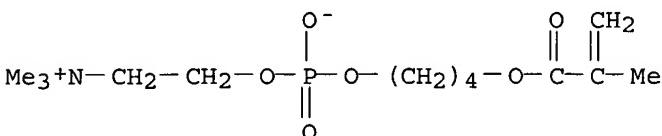
RN 150120-15-3 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



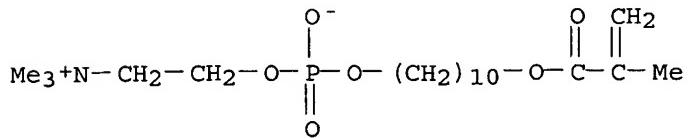
RN 158760-93-1 HCPLUS

CN 3,5,10-Trioxa-4-phosphatridec-12-en-1-aminium, 4-hydroxy-N,N,N,12-tetramethyl-11-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



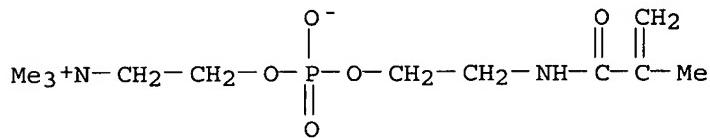
RN 179637-06-0 HCAPLUS

CN 3,5,16-Trioxa-4-phosphonadec-18-en-1-aminium, 4-hydroxy-N,N,N,18-tetramethyl-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 179953-15-2 HCAPLUS

CN 3,5-Dioxa-8-aza-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Ito	2003	24	3021	Biomaterials	
Motorola Inc	2001			EP 1190254 A	HCAPLUS
Motorola Inc	2001			WO 2001001143 A	HCAPLUS
Motorola Inc	2001			JP 2003524150 A	
Motorola Inc	2001			US 6372813 A	HCAPLUS
Surmodics Inc	2002			EP 1141385 A	HCAPLUS
Surmodics Inc	2002			WO 2000040593 A	HCAPLUS
Surmodics Inc	2002			JP 2002534663 A	
Surmodics Inc	2002			US 6465178 A	HCAPLUS
The Kanagawa Academy Of	2004			JP 2004125781 A	HCAPLUS

L82 < ANSWER 11 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1038468 HCAPLUS

DOCUMENT NUMBER: 142:22289

TITLE: Anti-Fc antibodies and fragments or antibody-binding molecules for clinical diagnosis and biotechnological research

INVENTOR(S): Kawamura, Kenji

PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004340818	A2	20041202	JP 2003-139139	20030516
PRIORITY APPLN. INFO.:			JP 2003-139139	20030516

<ED Entered STN: 03 Dec 2004

AB Disclosed is an immunoassay container comprising ≥1

antibody-binding mol. such as protein A, protein G, anti-Fc antibodies or Fab fragments. The antibody-binding mol.-coated container is treated with hydrophilic polymer or grafted hydrophilic polymer. The immunoassay container is useful for ELISA without the requirement of blocking procedure and is especially useful for clin. diagnosis and biotechnol. purpose.

IC ICM G01N033-543

CC 15-1 (Immunochemistry)

Section cross-reference(s) : 9

IT Biotechnology

Diagnosis

Human

Immunoassay

(anti-Fc antibodies and fragments or antibody-binding mols. for clin. diagnosis and biotechnol. research)

IT Immunoassay

(apparatus; anti-Fc antibodies and fragments or antibody-binding mols. for clin. diagnosis and biotechnol. research)

IT Immunoassay

(enzyme-linked immunosorbent assay; anti-Fc antibodies and fragments or antibody-binding mols. for clin. diagnosis and biotechnol. research)

IT 25249-16-5, 2-Polyhydroxyethylmethacrylate 125275-25-4,

2-Methacryloyloxyethylphosphorylcholine-butylmethacrylate copolymer

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(anti-Fc antibodies and fragments or antibody-binding mols. for clin. diagnosis and biotechnol. research)

IT 125275-25-4, 2-Methacryloyloxyethylphosphorylcholine-butylmethacrylate copolymer

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(anti-Fc antibodies and fragments or antibody-binding mols. for clin. diagnosis and biotechnol. research)

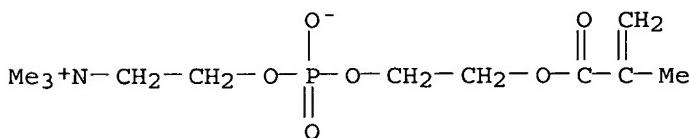
RN 125275-25-4 HCAPLUS

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

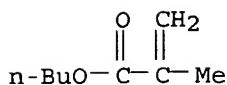
CMF C11 H22 N 06 P



CM 2

CRN 97-88-1

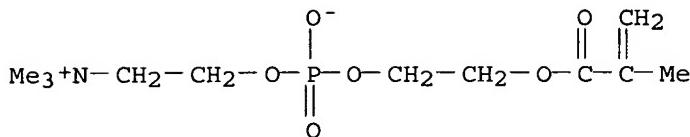
CMF C8 H14 O2



L82 /ANSWER 12 OF 70 HCPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:348566 HCPLUS
 DOCUMENT NUMBER: 141:153361
 TITLE: Evaluation of stabilizing effect for several monoclonal antibody immobilized quartz crystal microbalance by stabilizer reagents
 AUTHOR(S): Park, Jong-Won; Kurosawa, Shigeru; Aizawa, Hidenobu; Naganawa, Ryuichi; Yamada, Satoshi; Ishihara, Kazuhiko
 CORPORATE SOURCE: National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, 305-8565, Japan
 SOURCE: Proceedings of the IEEE International Frequency Control Symposium & PDA Exhibition jointly with the 17th European Frequency and Time Forum, Tampa, FL, United States, May 4-8, 2003/(2003), 978-980.
 Institute of Electrical and Electronics Engineers: New York, N. Y.
 CODEN: 69FHUZ; ISBN: 0-7803-7688-9
 DOCUMENT TYPE: Conference
 LANGUAGE: English
 ED Entered STN: 29 Apr 2004
 AB We tested five stabilizers for remaining immunol. activity of anti-dinitrophenol (DNP), anti-C-reactive protein (CRP), and anti-2,3,7,8 tetrachlorodibenzo-p-dioxin (TCDD) antibody immobilized QCM under several storage conditions. Investigated nine stabilizers were as following; 0.25 % BlockAce and StabilGuard as com. available reagents, 0.2 % glycerin and 0.2 % Bovine Serum Albumin (BSA) as conventional stabilizers, 0.2 % MPC copolymer stabilizer as developed reagent, and PBS solution as blank reagent. According to the exptl. results, we found MPC copolymer (NOF Corp., Japan) coated QCM showed highly immunol. activity through specific antigens and their antibodies after the heat acceleration test and long-term storage.
 CC 9-10 (Biochemical Methods)
 IT Immunoassay
 Stability
 Stabilizing agents
 (evaluation of stabilizing effect for several monoclonal antibody immobilized quartz crystal microbalance by stabilizer reagents)
 IT 56-81-5, Glycerin, analysis 125275-25-4 658045-21-7, BlockAce
 658051-44-6, StabilGuard
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
 (evaluation of stabilizing effect for several monoclonal antibody immobilized quartz crystal microbalance by stabilizer reagents)
 IT 125275-25-4
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
 (evaluation of stabilizing effect for several monoclonal antibody immobilized quartz crystal microbalance by stabilizer reagents)
 RN 125275-25-4 HCPLUS
 CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

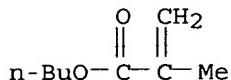
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 97-88-1
CMF C8 H14 O2



RETABLE

Referenced Author (RAU)	Year (R PY)	VOL (R VL)	PG (R PG)	Referenced Work (RWK)	Referenced File
Bunde, R	1998	46	1223	Talanta	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Kurosawa, S	2000	47	1256	IEEE Trans Ultrason,	
Luppa, P	2001	314	1	Clin Chim Acta	HCAPLUS
Park, J	2003	50	193	IEEE Trans Ultrason,	
Sakaki, S	1999	47	523	J Biomed Mater Res	HCAPLUS
Sakaki, S	2000	32	637	Polym J	HCAPLUS
Steegborn, C	1997	12	19	Biosens Bioelect	HCAPLUS
Towery, R	2001	16	1	Biosen Bioelect	HCAPLUS

L82 ANSWER 13 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:338278 HCAPLUS

DOCUMENT NUMBER: 141:273834

TITLE: Reproducibility evaluation of immunosensor with antibody-immobilized beads column (II)

AUTHOR(S): Fuchiwaki, Yusuke; Rikitake, Kotaro; Futagami, Norimichi; Yasuzawa, Mikito

CORPORATE SOURCE: Department of Chemical Science and Technology, Faculty of Engineering, The University of Tokushima, Tokushima, 770-8506, Japan

SOURCE: Chemical Sensors (2003), 19(Suppl. B), 64-66

CODEN: KAGSEU

PUBLISHER: Denki Kagakkai Kagaku Sensa Kenkyukai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

ED Entered STN: 26 Apr 2004

AB The reproducibility of the antibody-immobilized beads by the acidic antigen-antibody bonds cleavage treatment was performed using an optical procedure. The fluorescein derivative was conjugated to the antigen in order to determine the affinity of the immobilized antibody. The attempt to reduce the nonspecific adsorption of fluorescein-labeled antigen to immobilized antibody was also performed by adding polyethylene glycol and

poly(2-methacryloyloxyethyl phosphorylcholine) in the reaction solns. Although, both polymers were effective to reduce the nonspecific adsorption, either could eliminate the nonspecific adsorption. Fair reproducibility was observed for approx. first five repetition, while the affinity reduction of the immobilized antibody was inevitable by the acidic treatment of pH 3.

CC 9-10 (Biochemical Methods)

Section cross-reference(s): 2, 15

IT 25322-68-3, Polyethylene glycol 67881-99-6, Poly(2-methacryloyloxyethyl phosphorylcholine)

RL: ARU (Analytical role, unclassified); ANST (Analytical study) (effect on prevention of non-specific adsorption on beads of; reproducibility evaluation of immunosensor with antibody-immobilized beads column)

IT 67881-99-6, Poly(2-methacryloyloxyethyl phosphorylcholine)

RL: ARU (Analytical role, unclassified); ANST (Analytical study) (effect on prevention of non-specific adsorption on beads of; reproducibility evaluation of immunosensor with antibody-immobilized beads column)

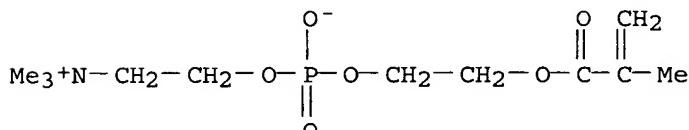
RN 67881-99-6 HCPLUS

CN 3,5,8-Trioxa-4-phosphoundec-1-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

CMF C11 H22 N O6 P



L82 ANSWER 14 OF 70 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:172237 HCPLUS

DOCUMENT NUMBER: 136:213193

TITLE: Highly reproducible agglutination immunoassay method and reagent

INVENTOR(S): Shigenobu, Kayoko; Shuto, Kenshiro; Sakaki, Shujiro

PATENT ASSIGNEE(S): Kyowa Medex Co.,ltd, Japan; Nof Corporation

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002018953	A1	20020307	WO 2001-JP7385	20010828
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,				

US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 CA 2420770 AA 20020307 CA 2001-2420770 20010828
 AU 2001080210 A5 20020313 AU 2001-80210 20010828
 EP 1314982 A1 20030528 EP 2001-958575 20010828
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
 US 2003166302 A1 20030904 US 2003-363038 20030228
 PRIORITY APPLN. INFO.: JP 2000-259964 A 20000829
 WO 2001-JP7385 W 20010828

ED Entered STN: 08 Mar 2002

AB A highly reproducible agglutination immunoassay method is provided, in which the agglutination of insol. carrier particles (e.g., latex) takes place in a stable and homogeneous way. An immunoassay reagent used for this method is also provided. In this agglutination immunoassay method, an antigenic substance in a test sample is bound to the insol. carrier particles substantially not carrying any bound-antigen or -antibody, and then, an antibody or an antibody complex capable of specifically reacting with the antigenic substance is bound to the particles to selectively give rise to the agglutination. The reagent contains a polymer which is prepared either by homogeneously polymerizing a monomer possessing a phosphorylcholine group and a vinyl group (e.g., 2-methacryloyloxyethylphosphorylcholine), or co-polymerizing the monomer possessing a phosphorylcholine group and a vinyl group, and another monomer possessing a vinyl group (e.g., n-butylmethacrylate). An improved reproducibility was obtained when the HbA1c concentration in blood samples were determined with this reagent using anti-HbA1c monoclonal antibody in comparison to the conventional reagents.

IC ICM G01N033-543

CC 9-10 (Biochemical Methods)

IT Immunoassay

(agglutination test; highly reproducible agglutination immunoassay method and reagent)

IT 97-88-1, n-Butylmethacrylate 67881-98-5, 2-

Methacryloyloxyethylphosphorylcholine

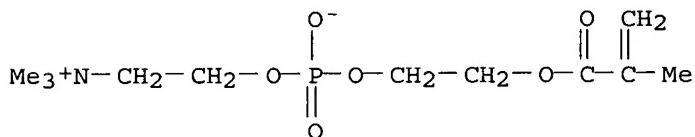
RL: RCT (Reactant); RACT (Reactant or reagent)
 (highly reproducible agglutination immunoassay method and reagent)

IT 67881-98-5, 2-Methacryloyloxyethylphosphorylcholine

RL: RCT (Reactant); RACT (Reactant or reagent)
 (highly reproducible agglutination immunoassay method and reagent)

RN 67881-98-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

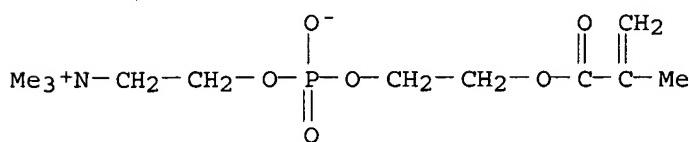


RETABLE

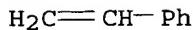
Referenced Author (RAU)	Year (R PY)	VOL (R VL)	PG (R PG)	Referenced Work (RWK)	Referenced File
Hitachi Chemical Co Ltd	1987			JP 62218865 A	HCPLUS

Nitto Electric Co Ltd	1986	JP 61274261 A	HCAPLUS
Oriental Yeast Co Ltd	1996	JP 08101196 A	HCAPLUS

L82 ANSWER 15 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2002:692742 HCAPLUS
 DOCUMENT NUMBER: 138:316997
 TITLE: Water-soluble phospholipid polymers as a novel synthetic blocking reagent in an immunoassay system
 AUTHOR(S): Sakaki, Shujiro; Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko
 CORPORATE SOURCE: Tokyo Medical and Dental University, Tokyo, Japan
 SOURCE: Biomedical Diagnostic Science and Technology (2002), 353-366. Editor(s): Law, Wai Tak; Akmal, Naim; Usmani, Arthur M. Marcel Dekker, Inc.: New York, N.Y.
 CODEN: 69DBEP; ISBN: 0-8247-0725-7
 DOCUMENT TYPE: Conference
 LANGUAGE: English
 ED Entered STN: 13 Sep 2002
 AB Water-soluble amphiphilic PMSt, a random copolymer of 2-methacryloyloxyethyl phosphorylcholine and styrene, was found to be an effective blocking reagent in the ELISA method. Measurements of the nonspecific adsorption and immunol. activities of enzyme-antibody conjugate showed that PMSt has comparable or even better performance than bovine serum albumin and casein as a blocking reagent. No characteristic changes of PMSt were observed from its being frozen and melted repeatedly.
 CC 9-10 (Biochemical Methods)
 IT Immunoassay
 (enzyme-linked immunosorbent assay; water-soluble phospholipid polymers as novel synthetic blocking reagent in immunoassay system)
 IT Immunoassay
 (water-soluble phospholipid polymers as novel synthetic blocking reagent in immunoassay system)
 IT 134483-35-5
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (water-soluble phospholipid polymers as novel synthetic blocking reagent in immunoassay system)
 IT 134483-35-5
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (water-soluble phospholipid polymers as novel synthetic blocking reagent in immunoassay system)
 RN 134483-35-5 HCAPLUS
 CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI)
 (CA INDEX NAME)
 CM 1
 CRN 67881-98-5
 CMF C11 H22 N O6 P



CM 2

CRN 100-42-5
CMF C8 H8

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Anderton, B	1980	2	122	Immunol Today	
Donovan, J	1975	250	1966	J Biol Chem	HCAPLUS
Farr, A	1981	47	129	J Immunol Method	HCAPLUS
Ghosh, S	1974	337	395	Biochem Biophys Acta	HCAPLUS
Ikemi, M	1982	15	281	Macromolecules	HCAPLUS
Imagawa, M	1982	4	41	J Appl Biochem	HCAPLUS
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Ishihara, K	1994	32	859	J Polym Sci A, Polym	HCAPLUS
Ishihara, K	1990	22	355	Polym J	HCAPLUS
Ishikawa, E	1987	1	238	J Clin Lab Anal	HCAPLUS
Ishikawa, E	1983	4	209	J Immunoassay	HCAPLUS
Isikawa, E	1983	18	219	Develop Immunol	
Orci, L	1985	28	528	Diabetologia	HCAPLUS
Osborn, M	1978	77	R27	J Cell Biol	MEDLINE
Wisdom, G	1976	22	1243	Clin Chem	HCAPLUS

L82 ANSWER 16 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:617197 HCAPLUS

DOCUMENT NUMBER: 135:192510

TITLE: Microparticle dispersion agent for clinical test,
reagent for clinical test, its manufacturing method,
clinical test method and applicationINVENTOR(S): Shudo, Kenshiro; Sakaki, Shujiro; Yamada, Satoru;
Sakamoto, Nobuyuki; Suzuki, Tadashi

PATENT ASSIGNEE(S): Nof Corporation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001228149	A2	20010824	JP 2000-34931	20000214
PRIORITY APPLN. INFO.:			JP 2000-34931	20000214

ED Entered STN: 24 Aug 2001

AB A microparticle dispersion agent for a clin. test is provided, which improves a dispersion stability of the microparticle-containing reagent and a redispersion ability of the microparticles for clin. test coagulated during the process of reagent preparation or measurement without decreasing the activity of the bound antigen or antibody. The microparticle dispersion agent possessing high reproducibility and high sensitivity is processed by a simple method suited for an automated analyzer. The agent contains as an effective component a polymer prepared by polymerizing the monomer composition

consisting of phosphorylcholin-analogous group-containing monomer (e.g., 2-(meth)acryloyloxyethyl-2'-(trimethylammonio)ethylphosphate).

IC ICM G01N033-531

ICS G01N033-543

CC 9-10 (Biochemical Methods)

IT Immunoassay

(agglutination test; microparticle dispersion agent for clin. test, reagent for clin. test, manufacturing method, clin. test method and application)

IT Immunoassay

(apparatus, automated; microparticle dispersion agent for clin. test, reagent for clin. test, manufacturing method, clin. test method and application)

IT 97-88-1, n-Butylmethacrylate 18358-13-9, Methacrylate, reactions

67881-98-5 150120-15-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(microparticle dispersion agent for clin. test, reagent for clin. test, manufacturing method, clin. test method and application)

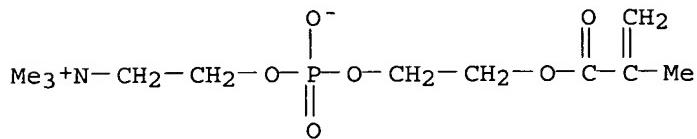
IT 67881-98-5 150120-15-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(microparticle dispersion agent for clin. test, reagent for clin. test, manufacturing method, clin. test method and application)

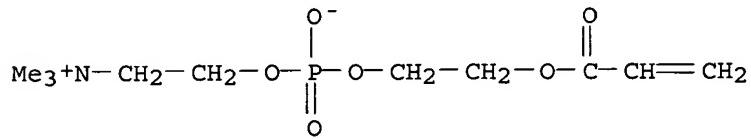
RN 67881-98-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 150120-15-3 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L82 ANSWER 17 OF 70 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:759015 HCPLUS

DOCUMENT NUMBER: 137:68069

TITLE: A comparison of the use of an ATP-based bioluminescent assay and image analysis for the assessment of bacterial adhesion to standard HEMA and biomimetic soft contact lenses

AUTHOR(S): Andrews, C. S.; Denyer, S. P.; Hall, B.; Hanlon, G. W.; Lloyd, A. W.

CORPORATE SOURCE: School of Pharmacy and Biomolecular Sciences, Biomedical Materials Research Group, University of Brighton, Moulsecoomb, Brighton, BN2 4GJ, UK

SOURCE: Biomaterials (2001), 22(24), 3225-3233

CODEN: BIMADU; ISSN: 0142-9612
 PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal
 LANGUAGE: English

ED Entered STN: 18 Oct 2001

AB The aim of this study was to investigate in vitro adhesion of clin. relevant bacteria to standard HEMA and novel biomimetic soft contact lenses (SCL) using bioluminescent ATP assay and image anal. Unworn SCL were incubated with *Pseudomonas aeruginosa*, *Staphylococcus epidermidis* or *Serratia marcescens* suspended in sterile phosphate buffered saline (PBS). The level of bacterial adhesion after 1, 2, 4, 6 and 18 h, was assessed using both image anal. and a bioluminescent ATP assay. Species differences in the overall level of adhesion to the different types of lens were observed using both measurement techniques. Generally bacterial adhesion was shown to peak at 4-6 h, then decline to a much lower level by 18 h. After 4 h, adhesion of all species of bacteria to the biomimetic SCL (omafilcon A) was found to be significantly lower than to the standard HEMA SCL (polymacon) ($p<0.05$, Student's t-test, $n=4$). Both these techniques demonstrated that novel biomimetic SCL materials exhibit significantly lower bacterial adhesion in vitro compared to standard HEMA SCL materials. SCL manufactured with these novel biomimetic materials may reduce the risk of infection.

CC 63-7 (Pharmaceuticals)

IT 25053-81-0, Polymacon 144056-32-6, Omafilcon A

RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(comparison of use of ATP-based bioluminescent assay and image anal. for assessment of bacterial adhesion to standard HEMA and biomimetic soft contact lenses)

IT 144056-32-6, Omafilcon A

RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(comparison of use of ATP-based bioluminescent assay and image anal. for assessment of bacterial adhesion to standard HEMA and biomimetic soft contact lenses)

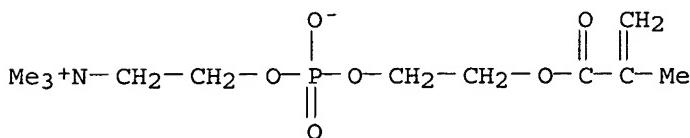
RN 144056-32-6 HCPLUS

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate) and 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

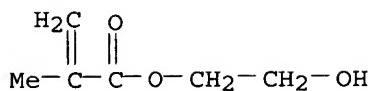
CMF C11 H22 N 06 P



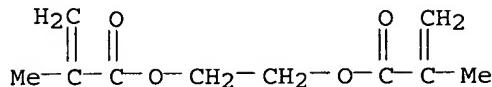
CM 2

CRN 868-77-9

CMF C6 H10 O3



CM 3

CRN 97-90-5
CMF C10 H14 O4

RETABLE

Referenced Author (RAU)	Year (R PY)	VOL (R VL)	PG (R PG)	Referenced Work (RWK)	Referenced File
Cowell, B	1998	84	950	J Appl Microbiol	HCAPLUS
Denyer, S	1989		189	ATP luminescence rap	HCAPLUS
Elder, M	1993	273	509	The practitioner	
Gopinathan, U	1997	82	653	J Appl Microbiol	MEDLINE
Gristina, A	1987	237	1588	Science	HCAPLUS
Hall, B	1989	10	219	Biomaterials	HCAPLUS
Hayward, J	1984	5	135	Biomaterials	HCAPLUS
Holden, B	1996	22	47	CLAO J	MEDLINE
Lan, J	1999	27	218	Aust NZ J Ophthalmol	MEDLINE
Liesegang, T	1997	16	125	Cornea	MEDLINE
Lloyd, A	2000	23	119	Contact Lens Anterio	
Lloyd, A	1997	38	884	Invest Ophthalmol Vi	
Lundin, A	1989		11	ATP luminescence rap	HCAPLUS
Schultz, C	1995	15	243	J Ind Microbiol	HCAPLUS
Schultz, C	2000	24	113	J Ind Microbiol Biot	HCAPLUS
Schultz, C	2000	25	17	J Ind Microbiol Biot	HCAPLUS
Slusher, M	1987	105	110	Arch Ophthalmol	MEDLINE
Stern, G	1990	9	S36	Cornea	
Taylor, R	1998	75	23	Optometry Vision Sci	MEDLINE
Thakur, A	1999	27	224	Aust NZ J Ophthalmol	MEDLINE
Williams, T	1997	25	S30	Aust NZ J Ophthalmol	
Williams, T	1998	75	266	Optometry Vision Sci	MEDLINE

L82 ANSWER 18 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:457297 HCAPLUS

DOCUMENT NUMBER: 133:86476

TITLE: Immunoassay container free from non-specific adsorption

INVENTOR(S): Tanaka, Hayao

PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan

SOURCE: PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

WO	2000039582	A1	20000706	WO 1999-JP5979	19991028
W:	AU, CA, CN, JP, KR, NO, NZ, RU, SG, US				
RW:	AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA	2356857	AA	20000706	CA 1999-2356857	19991028
AU	9963667	A1	20000731	AU 1999-63667	19991028
EP	1152242	A1	20011107	EP 1999-951118	19991028
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP	3681983	B2	20050810	JP 2000-591430	19991028
JP	2005099040	A2	20050414	JP 2004-341443	20041126
PRIORITY APPLN. INFO.:					
				JP 1998-367404	A 19981224
				JP 1999-56253	A 19990303
				JP 1999-212096	A 19990727
				JP 2000-591430	A3 19991028
				WO 1999-JP5979	W 19991028

ED Entered STN: 07 Jul 2000

AB An immunoassay container is designed so that the saturation adsorption of mols. used in the assay is smaller than 1×10^{-1} pmol/cm². It is actually free from non-specific adsorption causative of reagent loss, sensitivity decrease, and precision decrease. The inner surface of the container is formed or coated with highly hydrophilic polymer or highly hydrophobic polymer, preferably coated with highly hydrophilic polymer, or more preferably coated with extremely highly hydrophilic polymer to prevent the adsorption of assay reagent, antigen or antibody. The extremely highly hydrophilic polymer is selected from polyhydroxyalkylmethacrylate, polyoxyalkylene (C₂-C₄) group-containing methacrylate polymer or copolymer, polyvinylpyrrolidone, phospholipid-polymer complex, or 2-methacryloyloxyethylphosphorylcholine polymer or copolymer.

IC ICM G01N033-53

CC 9-10 (Biochemical Methods)

Section cross-reference(s): 15

IT Immunoassay

(enzyme-linked immunosorbent assay; immunoassay container free from non-specific adsorption)

IT Blood serum

Containers

Hydroxyl group

Immunoassay

(immunoassay container free from non-specific adsorption)

IT 79-41-4D, Methacrylic acid, polyoxyalkylene (C₂-C₄) group-containing polymer, and copolymer 97-88-1D, Butyl methacrylate, copolymer with 2-methacryloyloxyethyl phosphorylcholine 9002-84-0, Polytetrafluoroethylene 25087-26-7D, Polymethacrylic acid, hydroxyalkyl derivs. 25249-16-5 67881-98-5D, 2-Methacryloyloxyethyl phosphorylcholine, polymer and copolymer with butylmethacrylate

RL: NUU (Other use, unclassified); USES (Uses)

(immunoassay container free from non-specific adsorption)

IT 67881-98-5D, 2-Methacryloyloxyethyl phosphorylcholine, polymer and copolymer with butylmethacrylate

RL: NUU (Other use, unclassified); USES (Uses)

(immunoassay container free from non-specific adsorption)

RN 67881-98-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

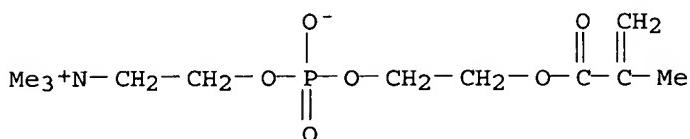
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (polymeric solid support-immobilized antigen or antibody and its use)

IT 67881-98-5DP, polymers and copolymers 67882-00-2P
 125275-25-4P 134483-35-5P 148569-41-9P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (polymeric solid support-immobilized antigen or antibody and its use)

RN 67881-98-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



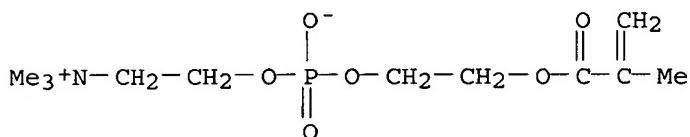
RN 67882-00-2 HCPLUS

CN Ethanaminium, 2-[hydroxy[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]phosphinyl]oxy]-N,N,N-trimethyl-, inner salt, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

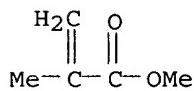
CMF C11 H22 N O6 P



CM 2

CRN 80-62-6

CMF C5 H8 O2



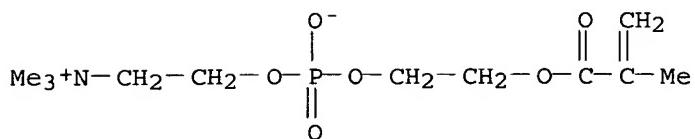
RN 125275-25-4 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

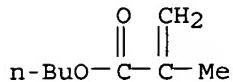
CM 1

CRN 67881-98-5

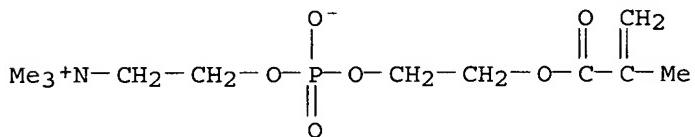
CMF C11 H22 N O6 P



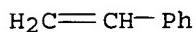
CM 2

CRN 97-88-1
CMF C8 H14 O2RN 134483-35-5 HCPLUS
CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI)
(CA INDEX NAME)

CM 1

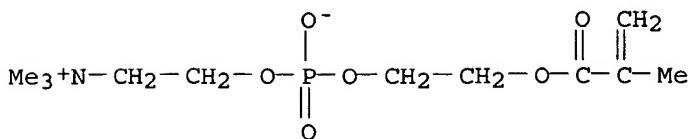
CRN 67881-98-5
CMF C11 H22 N O6 P

CM 2

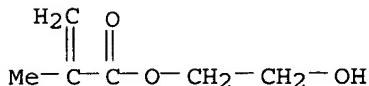
CRN 100-42-5
CMF C8 H8RN 148569-41-9 HCPLUS
CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 868-77-9
CMF C6 H10 O3

L82 ANSWER 22 OF 70 HCPLUS COPYRIGHT 2005 ACS on STN

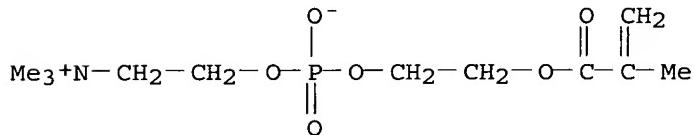
ACCESSION NUMBER: 1998:112708 HCPLUS
 DOCUMENT NUMBER: 128:215281
 TITLE: Stabilization of proteins with phosphorylcholine group-containing polymers and stabilized compositions
 INVENTOR(S): Sakaki, Shujiro; Sudo, Kenshiro; Yamada, Akira; Ando, Ryota; Matsuyama, Kazuo; Koinuma, Yasuhiro; Nakabayashi, Norio; Ishihara, Kazuhiko
 PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan; Nakabayashi, Norio; Ishihara, Kazuhiko; Research Development Corp. of Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10045794	A2	19980217	JP 1996-202367	19960731
PRIORITY APPLN. INFO.:			JP 1996-202367	19960731
ED Entered STN: 25 Feb 1998				
AB Proteins, e.g. albumins, blood coagulation factors, Igs, enzymes for cleaning contact lenses, etc., are stabilized in the presence of phosphorylcholine group-containing polymers. Also claimed are stabilized compns. containing (A) polymers prepared from monomers containing CH ₂ :CXCO ₂ CH ₂ CH ₂ OP(O)(O-)OCH ₂ CH ₂ N+Me ₃ (X = H, Me) 1.0 + 10-4-80, (B) proteins for plasma prepns. or labeled immunoreactive substances 1.0 + 10-14-20, and (C) buffer solns. 0-99.9 weight%. A solution of 5.0 + 10-4 weight% human IgG and 2.0 weight% poly(2-methacryloyloxyethylphosphorylcholine) (preparation given) in a Na ₂ HPO ₄ /NaH ₂ PO ₄ buffer was incubated at 40° for 4 wk to show reactivity with anti-human IgG1 antibody-immobilized plate 104.8%, vs. 5.5% for a control solution containing BSA instead of the polymer.				
IC ICM C07K001-00				
ICS C07K014-00; C07K016-00; C08L089-00; C08L101-00; C12N009-96; C12Q001-25; A61K038-00; A61K038-16; A61K038-43; C08F030-02; C08L043-02				

CC 9-16 (Biochemical Methods)
 Section cross-reference(s): 7, 15, 38, 63
 IT 67881-99-6P 125275-25-4P 134483-35-5P
 RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use);
 PNU (Preparation, unclassified); THU (Therapeutic use); ANST (Analytical
 study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (stabilization of proteins such as albumins and **Igs** and
 enzymes and their labeled products with phosphorylcholine group-containing
 polymers)
 IT 67881-99-6P 125275-25-4P 134483-35-5P
 RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use);
 PNU (Preparation, unclassified); THU (Therapeutic use); ANST (Analytical
 study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (stabilization of proteins such as albumins and **Igs** and
 enzymes and their labeled products with phosphorylcholine group-containing
 polymers)
 RN 67881-99-6 HCPLUS
 CN 3,5,8-Trioxa-4-phosphoanodec-10-en-1-aminium, 4-hydroxy-N,N,N,10-
 tetramethyl-9-oxo-, inner salt, 4-oxide, homopolymer (9CI) (CA INDEX
 NAME)

CM 1

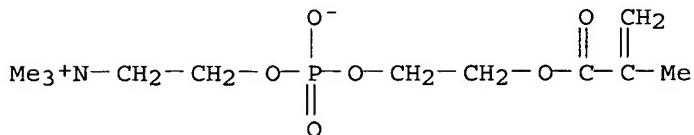
CRN 67881-98-5
 CMF C11 H22 N O6 P



RN 125275-25-4 HCPLUS
 CN 3,5,8-Trioxa-4-phosphoanodec-10-en-1-aminium, 4-hydroxy-N,N,N,10-
 tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

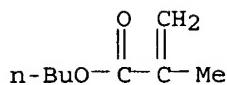
CM 1

CRN 67881-98-5
 CMF C11 H22 N O6 P



CM 2

CRN 97-88-1
 CMF C8 H14 O2



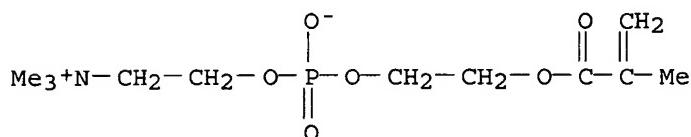
RN 134483-35-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

CMF C11 H22 N O6 P



CM 2

CRN 100-42-5

CMF C8 H8

 $\text{H}_2\text{C}\equiv\text{CH}-\text{Ph}$

L82 ANSWER 23 OF 70 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:606836 HCPLUS

DOCUMENT NUMBER: 123:5146

TITLE: Protein adsorption-preventing polymers or copolymers

INVENTOR(S): Sakaki, Hidejiro; Nakada, Shinji; Matsumoto, Takeo; Koinuma, Yasuyoshi; Nakabayashi, Norio; Ishihara, Kazuhiko

PATENT ASSIGNEE(S): Nippon Oils & Fats Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07083923	A2	19950331	JP 1993-228973	19930914
JP 3443891	B2	20030908		

PRIORITY APPLN. INFO.: JP 1993-228973 19930914

ED Entered STN: 14 Jun 1995

AB 2-Methacryloyloxyethyl phosphorylcholin polymer and copolymer containing 2-methacryloyloxyethyl phosphorylcholine are used for preventing protein adsorption. The (co)polymers are useful for increasing the reproductivity and accuracy of two-site method, e.g. antigen or antibody sandwich

immunoassay, for biochem. or clin. diagnosis. In example, poly-2-methacryloyloxyethyl phosphorylcholine, and 2-methacryloyloxyethyl phosphorylcholine copolymerd. with Bu methacrylate, Me methacrylate, 2-hydroxyethyl methacrylate, or styrene were prepared. The prepared polymer or copolymers were used for preventing adsorption of FITC-labeled mouse anti-human carcinoembryonic antigen IgG during immunoassay.

IC ICM G01N033-531

ICS G01N033-543

CC 9-15 (Biochemical Methods)

IT Immunoassay

(methacryloyloxyethyl phosphorylcholine polymer or copolymer for preventing protein adsorption in two-site anal. method or immunoassay)

IT 67881-98-5DP, 2-Methacryloyloxyethyl phosphorylcholine, polymers or copolymers 67881-99-6P 67882-00-2P

125275-25-4P 134483-35-5P 148569-41-9P

RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(methacryloyloxyethyl phosphorylcholine polymer or copolymer for preventing protein adsorption in two-site anal. method or immunoassay)

IT 67881-98-5DP, 2-Methacryloyloxyethyl phosphorylcholine, polymers or copolymers 67881-99-6P 67882-00-2P

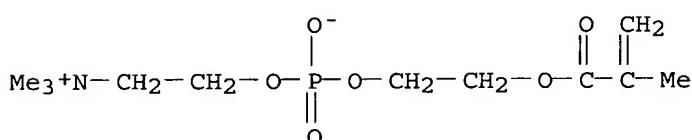
125275-25-4P 134483-35-5P 148569-41-9P

RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(methacryloyloxyethyl phosphorylcholine polymer or copolymer for preventing protein adsorption in two-site anal. method or immunoassay)

RN 67881-98-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



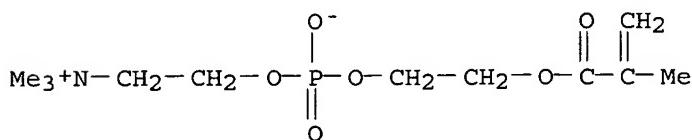
RN 67881-99-6 HCPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

CMF C11 H22 N 06 P



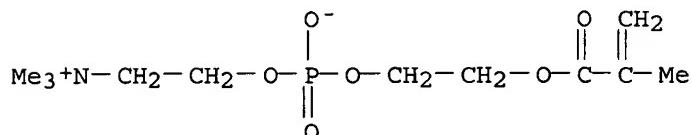
RN 67882-00-2 HCAPLUS

CN Ethanaminium, 2-[[hydroxy[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]phosphinyl]oxy]-N,N,N-trimethyl-, inner salt, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

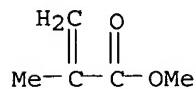
CMF C11 H22 N O6 P



CM 2

CRN 80-62-6

CMF C5 H8 O2



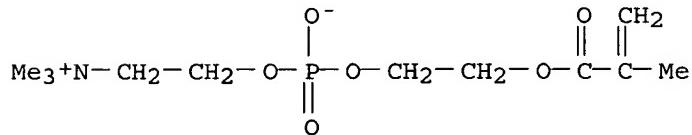
RN 125275-25-4 HCAPLUS

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

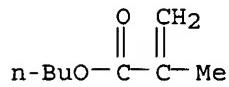
CMF C11 H22 N O6 P



CM 2

CRN 97-88-1

CMF C8 H14 O2



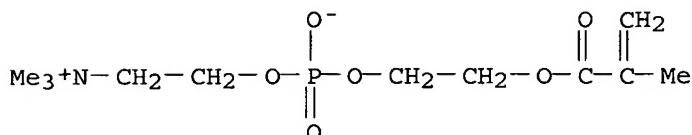
RN 134483-35-5 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

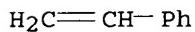
CMF C11 H22 N O6 P



CM 2

CRN 100-42-5

CMF C8 H8



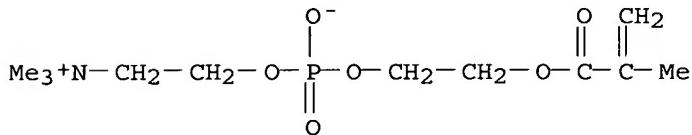
RN 148569-41-9 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

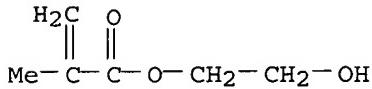
CMF C11 H22 N O6 P



CM 2

CRN 868-77-9

CMF C6 H10 O3



=> d ibib ab hitstr 24-26

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

L82 ANSWER 24 OF 70 USPATFULL on STN

ACCESSION NUMBER: 2004:203385 USPATFULL

TITLE: Agglutination accelerator for immunological measurement

INVENTOR(S): Sumida, Kyoichi, Amagasaki-shi, JAPAN

Wada, Koji, Amagasaki-shi, JAPAN

Ishihara, Kazuhiko, Bunkyo-ku, JAPAN

PATENT ASSIGNEE(S): WAKO PURE CHEMICALS INDUSTRIES, LTD., Chuo-ku, JAPAN
(non-U.S. corporation)

NUMBER	KIND	DATE
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PATENT INFORMATION: US 2004157276 A1 20040812

APPLICATION INFO.: US 2004-626502 A1 20040304 (10)

NUMBER	DATE
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PRIORITY INFORMATION: JP 2001-169051 20010605

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN,
55402-0903

NUMBER OF CLAIMS: 16

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: 1035

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An object of the present invention is to provide an immunoassay of PSA using an agglutination accelerator, which has an agglutination accelerating effect equal to or stronger than the known agglutination accelerator; hardly generates non-specific turbidity; and hardly generates salting out even in a solution with a high salt concentration. The present invention relates to an immunoassay of a prostate-specific antigen comprising performing an antigen-antibody reaction in the presence of a polymer having a monomer unit derived from a monomer represented by the following general formula [2]: ##STR1##

(wherein R.¹-R.³ are each independently a hydrogen atom or an alkyl group optionally having a hydroxyl group; R.⁴ is an alkylene group; R.⁵ is an alkylene group optionally having a substituent and optionally having an oxygen atom in a chain; R.⁶ is a hydrogen atom or a methyl group, and X is an oxygen atom or a --NH-- group), and a kit of reagent for an immunoassay comprising a reagent containing an agglutination accelerator for the immunoassay.

IT 67881-99-6P, Poly-2-methacryloyloxyethylphosphorylcholine

125275-25-4P, n-Butyl methacrylate-2-

Methacryloyloxyethylphosphorylcholine copolymer 144514-08-9P,

Stearyl methacrylate-2-Methacryloyloxyethylphosphorylcholinecopolymer
313216-64-7P 478015-82-6P

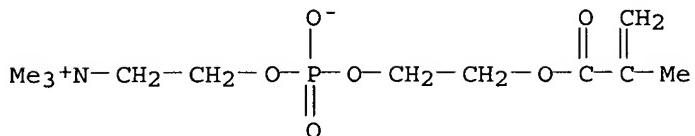
(agglutination-promoting agent for antigen or antibody immunoassay)

RN 67881-99-6 USPATFULL

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, homopolymer (9CI) (CA INDEX NAME)

CM 1

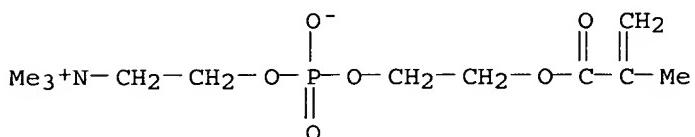
CRN 67881-98-5
 CMF C11 H22 N O6 P



RN 125275-25-4 USPATFULL
 CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

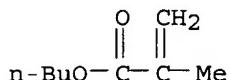
CM 1

CRN 67881-98-5
 CMF C11 H22 N O6 P



CM 2

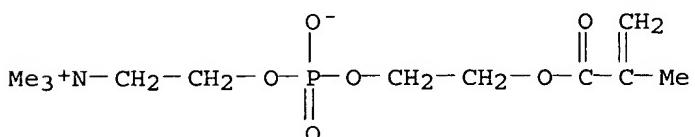
CRN 97-88-1
 CMF C8 H14 O2



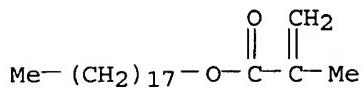
RN 144514-08-9 USPATFULL
 CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with octadecyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5
 CMF C11 H22 N O6 P

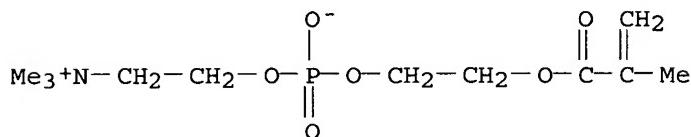


CM 2

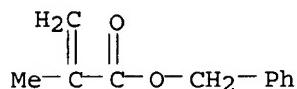
CRN 32360-05-7
CMF C22 H42 O2

RN 313216-64-7 USPATFULL
 CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P

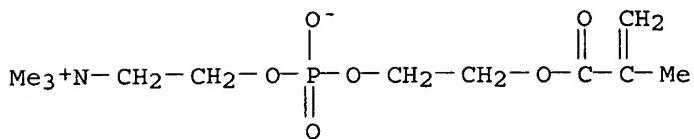
CM 2

CRN 2495-37-6
CMF C11 H12 O2

RN 478015-82-6 USPATFULL
 CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-hydroxy-N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)oxy]-1-propanaminium chloride (9CI) (CA INDEX NAME)

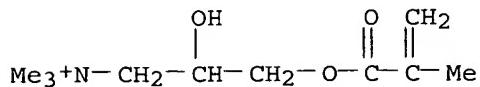
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 13052-11-4
 CMF C10 H20 N O3 . Cl

● Cl⁻

L82 ANSWER 25 OF 70 USPATFULL on STN
 ACCESSION NUMBER: 2003:238145 USPATFULL
 TITLE: Highly reproducible agglutination immunoassay method
 and reagents
 INVENTOR(S): Shigenobu, Kayoko, Sunto-gun, JAPAN
 Shuto, Kenshiro, Tsukuba-shi, JAPAN
 Sakaki, Shujiro, Tsukuba-shi, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003166302	A1	20030904
APPLICATION INFO.:	US 2003-363038	A1	20030228 (10)
	WO 2001-JP7385		20010828

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-259964	20000829
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP, P.O. BOX 34385, WASHINGTON, DC, 20043-9998	
NUMBER OF CLAIMS:	22	
EXEMPLARY CLAIM:	1	
LINE COUNT:	1030	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

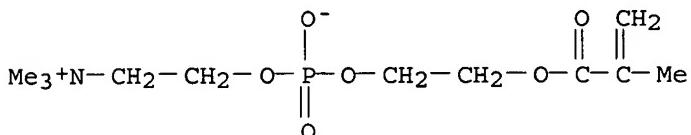
AB The present invention provides an agglutination immunoassay, wherein the agglutination of insoluble carrier particles such as latex are stabilized and uniformized to give good reproducibility, and a reagent therefor. In the agglutination immunoassay which comprises allowing an antigenic substance in a sample to bind to insoluble carrier particles carrying substantially neither antigens nor antibodies thereon, and allowing an antibody or an antibody complex which reacts specifically to the antigenic substance to bind to the antigenic substance to give a selective agglutination of the insoluble carrier particles, a

homopolymer prepared by polymerization of a monomer such as 2-methacryloyloxyethyl phosphorylcholine having a phosphorylcholine group and a vinyl group, or a copolymer prepared by polymerization of a monomer having a phosphorylcholine group and a vinyl group, with a monomer having a vinyl group such as n-butyl methacrylate is used.

IT 67881-98-5, 2-Methacryloyloxyethylphosphorylcholine
(highly reproducible agglutination immunoassay method and reagent)

RN 67881-98-5 USPATFULL

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L82 ANSWER 26 OF 70 USPATFULL on STN

ACCESSION NUMBER: 2001:170879 USPATFULL

TITLE: Measuring method and measuring reagent of C-reactive protein

INVENTOR(S): Yokohama, Hiroaki, Tokyo, Japan
Umeshara, Harumi, Shizuoka, Japan
Matsumori, Shigeru, Shizuoka, Japan
Yamada, Satoshi, Ibaraki, Japan
Shuto, Kenshiro, Ibaraki, Japan
Sakaki, Shujiro, Ibaraki, Japan
Suzuki, Ken, Ibaraki, Japan

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001026927	A1	20011004
APPLICATION INFO.:	US 2001-794323	A1	20010228 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-54096	20000229
	JP 2000-54102	20000229
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	VENABLE, P.O. Box 34385, Washington, DC, 20043-9998	
NUMBER OF CLAIMS:	24	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	5 Drawing Page(s)	
LINE COUNT:	1407	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An object of the present invention is to provide a method and a reagent for measuring the subject substances containing high concentration of C-reactive protein without dilution while avoiding prozone phenomenon.

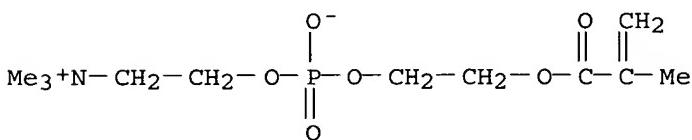
C-reactive protein is measured with a compound having a phosphorylcholine group and a cationic group shown by the general formula (I) [in the formula (I), where R.¹, R.² and R.³ stand for a hydrogen atom, substituted or non-substituted alkyl, or substituted or non-substituted alkenyl, and X.⁻ stands for an inorganic anion or an organic anion] and an antibody to C-reactive protein. Or, C-reactive protein is measured with a surface active agent having a

phosphorylcholine group, a surface active agent having a cationic group shown by the formula (II) [Y._{sub.1} stands for a hydrophobic group, and R._{sub.1}, R._{sub.2} and R._{sub.3} stand for a hydrogen atom, substituted or non-substituted alkyl, or substituted or non-substituted alkenyl], and an antibody to C-reactive protein. As an antibody to C-reactive protein, an antibody carried by a water-insoluble carrier such as latex made from polystyrene is preferable. ##STR1##

IT 67881-98-5, 2-Methacryloyloxyethylphosphorylcholine
(antibody and surface active agent having phosphorylcholine group and surface active agent having cationic group for measuring C-reactive protein)

RN 67881-98-5 USPATFULL

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



=> d iall abeq tech abex 27
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

L82 ANSWER 27 OF 70 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2003-175043 [17] WPIX
DOC. NO. CPI: C2003-045673
TITLE: Non-specific hybridization inhibitors based on polymer containing carboxyl, sulfone and phosphorylcholine groups, applicable in e.g. gene analysis and disease diagnosis in clinical examination.
DERWENT CLASS: A89 B04 D16
INVENTOR(S): ASHIHARA, Y; ISOMURA, M; SAKAKI, S; SHUTO, K; TSUCHIDA, M
PATENT ASSIGNEE(S): (NIOF) NOF CORP; (NIOF) NIPPON OILS & FATS CO LTD; (ASHI-I) ASHIHARA Y; (ISOM-I) ISOMURA M; (SAKA-I) SAKAKI S; (SHUT-I) SHUTO K; (TSUC-I) TSUCHIDA M
COUNTRY COUNT: 23
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
<hr/>							
WO 2002088389	A1	20021107	(200317)*	JA	26	C12Q001-68	
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR							
W: CN US							
JP 2003014767	A	20030115	(200317)		11	G01N033-566	
EP 1391519	A1	20040225	(200415)	EN		C12Q001-68	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR							
US 2004219546	A1	20041104	(200473)			C12Q001-68	
CN 1547615	A	20041117	(200516)			C12Q001-68	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
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WO 2002088389	A1	WO 2002-JP4128	20020425
JP 2003014767	A	JP 2002-123774	20020425
EP 1391519	A1	EP 2002-722775	20020425
		WO 2002-JP4128	20020425
US 2004219546	A1	WO 2002-JP4128	20020425
		US 2004-476069	20040211
CN 1547615	A	CN 2002-812948	20020425

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1391519	A1 Based on	WO 2002088389

PRIORITY APPLN. INFO: JP 2001-128699 20010426

INT. PATENT CLASSIF.:

MAIN:	C12Q001-68; G01N033-566
SECONDARY:	C08F230-02; G01N033-53
ADDITIONAL:	C08F030-02
INDEX:	C08F030:02

BASIC ABSTRACT:

WO 200288389 A UPAB: 20030312

NOVELTY - A non-specific inhibitor containing a polymer (H) having at least 1 carboxyl or sulfone group and a phosphorylcholine-like group in its molecule, which has a weight-average molecular weight of 1000-5000 and exhibits an effect of inhibiting non-specific hybridization, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) reagents for chemical examination containing the inhibitors and examination reagents; and
- (2) clinical examination by contacting a specimen with an examination reagent hybridizable with a definite nucleic acid-relating substance in the presence of the inhibitor, and detection of the reaction product.

USE - The inhibitors are applicable in e.g. gene analysis and disease diagnosis in clinical examination.

ADVANTAGE - With the inhibitors for clinical examination, non-specific hybridization can be inhibited and a nucleic acids-relating substance to be assayed can be easily and highly accurately detected.

Dwg. 0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB; GI; DCN

MANUAL CODES: CPI: A04-A; A12-L04; A12-V03C2; B04-C03; B04-E01;
B11-C08F2; B12-K04A; B12-K04F; D05-H09; D05-H12D1

TECH UPTX: 20030312

TECHNOLOGY FOCUS - POLYMERS - Preferred Inhibitors: The phosphorylcholine-like group is a component of a phosphorylcholine-like group-containing monomer of formula (I).

X = a divalent group;

Y = 1-6C alkyleneoxy group;

Z1 = H or R5O(C=O);

R1 = H or methyl;

R2, R3, R4 = independently H, 1-6C alkyl or hydroxyalkyl;

m = 0 or 1;

n = 1-4; and

R5 = 1-10C alkyl or 1-10C hydroxalkyl.

The polymer (H) is particularly made by polymerizing 5-95 mol.% a phosphorylcholine-like group-containing monomer, carboxyl group-containing monomer or/and sulfone group-containing monomer, and optionally 5-60 mol.% a hydrophobic monomer. The hydrophobic monomer is of formula (II)

R₆ = H or methyl;
 L₁ = -C₆H₄-, -C₆I₀-, -(C=O)O-, -O-, -(C=O)NH, -O(C=O)- or -O(C=O)O-;
 L₂ = H, -(CH₂)_g-L₃ or ((CH₂)_p-O)_h-L₃;
 g, h = 1-24;
 p = 3-5; and
 L₃ = H, methyl, -C₆H₅- or -OC₆H₅.

TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Examination Method: The amount of inhibitor applied in the hybridization system is equivalent to the presence of 0.0001-20 %, by weight polymer (H) in the inhibitor.

ABEX UPTX: 20030312

EXAMPLE - 2-(Methacryloyloxy)ethylphosphorylcholine (MPC; 19.4 g) and methacrylic acid (0.6 g) in water (40 g) were polymerized with succinic peroxide (1.6 g) at 60 degrees C for 8 hours, under nitrogen, to give a polymer powder (14.6 g; weight-average molecular weight = 153000) after precipitation from acetone; characterization by GPC and nuclear magnetic resonance (NMR). The polymer was tested as hybridization inhibitor, e.g. at 3.2 %, by weight, in the detection of a nucleic acid after hybridization.

=> d ibib ed ab hitind 28

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

L82 ANSWER 28 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 1
 ACCESSION NUMBER: 2004:220235 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA14117282686G
 TITLE: Biological evaluation and drug delivery application of cationically modified phospholipid polymers
 AUTHOR(S): Palmer, Rosemary R.; Lewis, Andrew L.; Kirkwood, Laura C.; Rose, Susanna F.; Lloyd, Andrew W.; Vick, Terry A.; Stratford, Peter W.
 CORPORATE SOURCE: Drug Delivery, Biocompatibles UK Ltd., Surrey, GU9 8QL, UK.
 SOURCE: Biomaterials, (2004) Vol. 25, No. 19, pp. 4785-4796.
 CODEN: BIMADU. ISSN: 0142-9612.
 COUNTRY: UNITED KINGDOM
 DOCUMENT TYPE: Journal
 FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 2004:357432
 LANGUAGE: English
 ENTRY DATE: Entered STN: 20041005
 Last Updated on STN: 20041229

ED Entered STN: 20041005
 Last Updated on STN: 20041229

AB Phospholipid-like polymers based on 2-methacryloyloxyethyl phosphorylcholine containing varying amts. of the cationically charged monomer choline methacrylate (CMA) from 0 to 30% have been prepared. Substrates coated with these materials were shown to bind significantly lower amts. of specific proteins compared to the uncoated control. ELISA assays demonstrated that fibrinogen did not bind appreciably to coatings containing 0-30% CMA, whereas albumin binding was seen to increase significantly as the CMA content of the coating increased. Platelet activation assays, measurement of plasma coagulation time and whole blood contact scanning electron microg. demonstrated that

the haemocompatibility of the coatings was shown to be unaffected by the CMA component. The CMA polymer coatings have been shown to absorb/adsorb many different drug compds. covering a wide range of mol. wts. and release these in a controlled fashion. The range of cationic polymers assessed can interact with the net neg. charge found in many large therapeutic biomols., such as DNA fragments used in gene therapy, that may be of interest in the preventative treatment of conditions such as restenosis. Coronary stents coated with 6% or 20% CMA-containing polymers have been shown to load and release this type of genetic material irresp. of mol. weight of the biomol. Ex vivo and in vivo studies have shown that these compds. can be delivered to the stented section of the vessel with very low quantities delivered outside the vessel target area.

CC 63-7
 ST Miscellaneous Descriptors
 phospholipid choline methacrylate coating protein adsorption stent drug delivery
 RN 208035-88-5

=> d hitstr 28
 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

'HITSTR' IS NOT A VALID FORMAT
 In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):end

=> d ibib ed ab hitind 29-
 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

YOU HAVE REQUESTED DATA FROM 42 ANSWERS - CONTINUE? Y/(N):y

L82 ANSWER 29 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 5
 ACCESSION NUMBER: 2004:228146 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA14219360387X
 TITLE: Copolymers of 2-methacryloyloxyethyl phosphorylcholine (MPC) as biomaterials
 AUTHOR(S): Haris, Parvez I.; Nakabayashi, N.; Iwasaki, Y.
 CORPORATE SOURCE: Inst. Biomater. Bioeng., Tokyo Med. Dent. Univ., Kanda, Tokyo, 101-0062, Japan.
 SOURCE: Bio-Medical Materials and Engineering, (2004) Vol, 14, No. 4, pp. 345-354.
 CODEN: BMNEO. ISSN: 0959-2989.
 COUNTRY: JAPAN
 DOCUMENT TYPE: Journal
 FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 2004:810369
 LANGUAGE: English
 ENTRY DATE: Entered STN: 20041014
 Last Updated on STN: 20050503
 ED Entered STN: 20041014
 Last Updated on STN: 20050503
 AB A review and discussion. Copolymers of 2-methacryloyloxyethyl

phosphorylcholine (MPC) showed good hemocompatibility as hypothesized. The hypothesis was surfaces having phosphorylcholine groups by polymerization

of

MPC could accumulate phospholipids from blood stream and show good blood compatibility. The authors designed and prepared a methacrylate having a phosphorylcholine group. While it was possible to introduce them by polymer reactions, polymer reaction is not always good method to prepare the desired pure surface. This must be very important point to consider for biomaterials. The hypothesis was confirmed by changing copolymer composition. The adsorption amount of phospholipids on the surfaces increased with increasing the MPC units in the copolymers. On the other hand, increasing MPC units in MPC copolymers decreased adsorption amount of peptides. There is limitation in blood compatibility tests in vitro due to unstable characteristics of blood itself. The authors evaluated them with series of blood compatibility tests, in vitro, ex vivo and in vivo, on coated PMMA beads, modified hollow fibers for hemodialysis and 2 mm small diameter blood vessels, resp. These data suggested MPC is a promising methacrylate to develop good blood contacting devices, which may not require systemic anticoagulation. Conventional blood compatible biomaterials were not suitable to make permeable membranes. But MPC is soluble in water and we could prepare permeable membranes to various solutes by the copolymer. Introduction of MPC copolymers on cellulose and polysulfone hollow fiber membranes gave them nonthrombogenicity but it did not give adverse effect on their permeability. These data suggested that it is possible to apply them to hemodialyzers, oxygenators and percutaneous glucose sensors to keep diabetic patients easier. MPC surfaces are good hydrogel to minimize damage on tissues by lubricating between organs and the coated devices. They do not induce denaturation of peptides, which is beneficial to keep activities of enzymes longer. And poly-MPC dissolved is applicable to stabilize several bioactive peptides in aqueous phase. So MPC polymers are useful to minimize fouling by inhibiting the adsorption of bioactive proteins. MPC has high potential to develop many varieties of new biomaterials useful in so-called biotechnol. MPC and their copolymers are com. available from NOF (Tokyo, Japan) and Biocompatibles (UK, as PC technol.).

CC 63-0

ST Miscellaneous Descriptors

review methacryloyloxyethyl phosphorylcholine copolymer biomaterial

RN 67881-98-5 (2-Methacryloyloxyethyl phosphorylcholine)

L82 ANSWER 30 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 7

ACCESSION NUMBER: 2003:125101 TOXCENTER

DOCUMENT NUMBER: PubMed ID: 12580778

TITLE: In vivo evaluation of a MPC polymer coated continuous flow left ventricular assist system

AUTHOR(S): Kihara Shin'ichiro; Yamazaki Kenji; Litwak Kenneth N; Litwak Philip; Kameneva Marina V; Ushiyama Hiroyuki; Tokuno Toshimasa; Borzelleca David C; Umezawa Mitsuo; Tomioka Jun; Tagusari Osamu; Akimoto Takehiko; Koyanagi Hitoshi; Kurosawa Hiromi; Kormos Robert L; Griffith Bartley P

CORPORATE SOURCE: Department of Surgery, McGowan Institute for Regenerative Medicine, University of Pittsburgh, 300 Technology Drive, Pittsburgh, PA 15219, U.S.A. kiharas@msx.upmc.edu

SOURCE: Artificial organs, (2003 Feb) 27 (2) 188-92.
Journal Code: 7802778. ISSN: 0160-564X.

COUNTRY: United States

DOCUMENT TYPE: (EVALUATION STUDIES)

FILE SEGMENT: Journal; Article; (JOURNAL ARTICLE)

MEDLINE

OTHER SOURCE: MEDLINE 2003106561
 LANGUAGE: English
 ENTRY DATE: Entered STN: 20030527
 Last Updated on STN: 20030527

ED Entered STN: 20030527
 Last Updated on STN: 20030527

AB The aim of this study was the evaluation of the thrombogenicity and the biocompatibility of the SunMedical EVAHEART left ventricular assist system (LVAS) coated with 2-methacryloyloxyethyl phosphorylcholine (MPC) polymer compared to a diamond-like carbon (DLC) coating. Four calves were implanted with the MPC polymer-coated LVAS. Eight calves were implanted with DLC coated LVAS. The thrombogenicity and biocompatibility of the pumps were evaluated. At explant, 60.0 +/- 37.2% (5-85%) of the pump surface area was still coated with MPC polymer after the duration of 45.0 +/- 32.0 days. In 1 out of 4 MPC and 2 out of 8 DLC coated pumps, there was a very small amount of thrombus around the seal ring; otherwise the blood contacting surfaces were free of thrombus. Major organs were normal except for a few lesions in kidneys from both groups. The MPC polymer coated EVAHEART LVAS seems to have low thrombogenicity and high biocompatibility similar to the DLC coated system. The current study demonstrated that the MPC polymer coating shows great promise for being used as an antithrombogenic substrate for the LVAS due to its ease of application, significant cost benefit, and reduction in anticoagulation therapy in acute postoperative period.

CT Animals
 Blood Physiology
 Carbon
 Cattle
 *Coated Materials, Biocompatible
 Coated Materials, Biocompatible: AE, adverse effects
 *Heart-Assist Devices
 Heart-Assist Devices: AE, adverse effects
 *Methacrylates
 Methacrylates: AE, adverse effects
 *Phosphorylcholine
 Phosphorylcholine: AE, adverse effects
 *Phosphorylcholine: AA, analogs & derivatives
 Research Support, Non-U.S. Gov't
 Thrombosis: ET, etiology

RN 107-73-3 (Phosphorylcholine)
 67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)
 7440-44-0 (Carbon)

CN 0 (Coated Materials, Biocompatible); 0 (Methacrylates)

L82 ANSWER 31 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 9
 ACCESSION NUMBER: 2002:147879 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA13713181798G
 TITLE: Improving the blood compatibility of ion-selective electrodes by employing poly(mpc-co-bma), a copolymer containing phosphorylcholine, as a membrane coating
 AUTHOR(S): Berrocal, Maria J.; Johnson, R. Daniel; Badr, Ibrahim H. A.; Liu, Mingdong; Gao, Dayong; Bachas, Leonidas G.
 CORPORATE SOURCE: Department of Chemistry and Center of Membrane Sciences, University of Kentucky, Lexington, KY, 40506-0055, USA.
 SOURCE: Analytical Chemistry, (2002) Vol. 74, No. 15, pp. 3644-3648.
 CODEN: ANCHAM. ISSN: 0003-2700.
 COUNTRY: UNITED STATES
 DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 2002:473221
 LANGUAGE: English
 ENTRY DATE: Entered STN: 20020702
 Last Updated on STN: 20020924
 ED Entered STN: 20020702
 Last Updated on STN: 20020924
 AB The hydrogel poly(2-methacryloyloxyethylphosphorylcholine-co-Bu methacrylate), or poly(MPC-co-BMA), was used as a coating for polyurethane- and poly(vinyl chloride)-based membranes to develop ion-selective electrodes (ISEs) with enhanced blood compatibility. Adverse interactions of poly(MPC-co-BMA) with blood were diminished due to the phosphorylcholine functionalities of the hydrogel, which mimic the phospholipid polar groups present on the surface of many cell membranes. As demonstrated by **immunostaining**, hydrogel-coated PVC membranes soaked in platelet-rich plasma showed less adhesion and activation of platelets than uncoated PVC membranes, indicating an improvement in biocompatibility owing to the hydrogel. Furthermore, little differences in the potentiometric response characteristics, e.g., slope, detection limit, and selectivity, of ISEs employing uncoated and coated membranes were observed
 CC 9-7
 ST Miscellaneous Descriptors
 blood compatibility ion selective electrode
 RN 7439-93-2 (Lithium)
 7439-95-4 (Magnesium)
 7440-09-7 (Potassium)
 7440-23-5 (Sodium)
 7440-70-2 (Calcium)
 14798-03-9 (Ammonium)
 107-73-3 (Phosphoryl choline)
 9002-86-2 (Polyvinyl chloride)
 RN 125275-25-4

L82 ANSWER 32 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 11
 ACCESSION NUMBER: 2003:84457 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA13818276154D
 TITLE: Importance of a biofouling-resistant phospholipid polymer to create a heparinized blood-compatible surface
 AUTHOR(S): Iwasaki, Yasuhiko; Shibata, Naoya; Ninomiya, Madoka; Kurita, Kimio; Nakabayashi, Nobuo; Ishihara, Kazuhiko
 CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo, 101-0062, Japan.
 SOURCE: Journal of Biomaterials Science, Polymer Edition, (2002) Vol. 13, No. 3, pp. 323-335.
 CODEN: JBSEEA. ISSN: 0920-5063.

COUNTRY: JAPAN
 DOCUMENT TYPE: Journal
 FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 2002:522306
 LANGUAGE: English
 ENTRY DATE: Entered STN: 20030415
 Last Updated on STN: 20030429

ED Entered STN: 20030415
 Last Updated on STN: 20030429
 AB Heparinization is believed to be one of the methods to suppress thrombus formation on blood-contacting surfaces. However, this study hypothesizes that heparinization alone might not be sufficient to provide a blood-compatible surface; i.e., a surface property that resists biofouling

is necessary to obtain an effective heparin-modified surface. 2-Methacryloyloxyethyl phosphorylcholine (MPC) polymers with 2-aminoethyl methacrylate (AEMA) were synthesized to immobilize heparin through ionic bonding. The primary amino groups of AEMA were considered to be the polymer surface because the ξ -potential of the surface was pos. when the mole fraction of the AEMA units was above 0.2. The antithrombogenic character of the polymer surface modified with heparin was evaluated by both Lee-White and microsphere column methods. The coagulation period of human whole blood in the absence of anticoagulant in glass tubing coated with the MPC polymer was longer than that in the original glass tube. Cell adhesion was completely inhibited on the MPC polymer surface after contact with human whole blood without anticoagulant. However, many adherent blood cells were observed on poly(2-ethylhexyl methacrylate-co-AEMA) (no MPC unit) even after heparinization. These results strongly indicate that the MPC polymer is a useful substrate where the heparin works well and that the heparin-immobilized MPC polymer has superior blood compatibility to the simple MPC polymer.

CC 63-7

ST Miscellaneous Descriptors

phospholipid polymer heparin coated antithrombogenic

RN 25719-51-1 (2-Ethylhexyl methacrylate polymer)

9005-49-6 (Heparin)

RN 182816-96-2; 503182-41-0; 503182-42-1

L82 ANSWER 33 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 12

ACCESSION NUMBER: 2000:225730 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA13414198008K

TITLE: Crosslinkable coatings from phosphorylcholine-based polymers

AUTHOR(S): Lewis, A. L.; Cumming, Z. L.; Goreish, H. H.; Kirkwood, L. C.; Tolhurst, L. A.; Stratford, P. W.

CORPORATE SOURCE: Research and Development Group, Farnham Business Park, Biocompatibles Ltd., Farnham, Surrey, GU9 8QL, UK.

SOURCE: Biomaterials, (2001) Vol. 22, No. 2, pp. 99-111.
CODEN: BIMADU. ISSN: 0142-9612.

COUNTRY: UNITED KINGDOM

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 2000:895492

LANGUAGE: English

ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020313

ED Entered STN: 20011116

Last Updated on STN: 20020313

AB 2-Methacryloyloxyethyl phosphorylcholine (MPC) was synthesized and then used in the preparation of crosslinked polymer membranes with lauryl methacrylate, hydroxypropyl methacrylate and trimethoxysilylpropyl methacrylate (crosslinker) comonomers. Some phys. aspects of the membrane properties were evaluated in order to establish the basis for the synthesis of a series of post-crosslinkable polymers. These materials were made by copolymer. of the constituent monomers via a free radical method, and characterized using NMR, FT-IR, viscometry and elemental anal. The optimum crosslink d. and conditions required for curing coatings of these polymers were investigated using atomic force microscopy (AFM) and showed the inclusion of 5 mol% silyl crosslinking agent to be ideal. A nanoindentation technique was employed to determine if the coating developed elasticity upon crosslinking. The biol. properties of the coatings were evaluated using a variety of protein adsorption assays and blood

contacting expts., and an enzyme **immunoassay** was developed to detect *E. coli* in order to assess the level of bacterial adhesion to these biomaterials. Polymers of this type were shown to be very useful as coating materials for improving the biocompatibility of, or reducing the levels of adherent bacteria to medical devices.

CC 63-7

ST Miscellaneous Descriptors

phosphorylcholine methacrylate copolymer crosslinked coating;
biocompatibility phosphorylcholine methacrylate copolymer

RN 144514-07-8 (3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium,
4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with
dodecyl 2-methyl-2-propenoate)

67881-98-5 (2-Methacryloyloxyethyl phosphorylcholine)

RN 210570-82-4

L82 ANSWER 34 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 13

ACCESSION NUMBER: 1999:204966 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA13205054803B

TITLE: The effect of the chemical structure of the phospholipid polymer on fibronectin adsorption and fibroblast adhesion on the gradient phospholipid surface

AUTHOR(S): Iwasaki, Yasuhiko; Sawada, Shin-Ichi; Nakabayashi, Nobuo;
Khang, Gilson; Lee, Hai Bang; Ishihara, Kazuhiko

CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo
Medical and Dental University, Tokyo, 101-0062, Japan.

SOURCE: Biomaterials, (1999) Vol. 20, No. 22, pp. 2185-2191.
CODEN: BIMADU. ISSN: 0142-9612.

COUNTRY: JAPAN

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 1999:714631

LANGUAGE: English

ENTRY DATE: Entered STN: 20011116

Last Updated on STN: 20020403

ED Entered STN: 20011116

Last Updated on STN: 20020403

AB The interaction between biocomponents and the polyethylene (PE) surface modified with poly[ω -methacryloyloxyalkyl phosphorylcholine (MAPC)] was considered taking into account the surface characteristics, i.e., d., mobility, and orientation of the poly(MAPC). The PE surface, grafted gradually with the poly(MAPC) was prepared by corona irradiation method. The amount of peroxide produced on the PE surface which was determined with 1,1-diphenyl-2-picrylhydrazyl, increased with an increase in the energy of the corona. The surface d. of the poly(MAPC) was increased with an increase in the amount of the peroxides produced by the corona irradiation. The orientation and mobility of the poly(MAPC) grafted on the PE surface was evaluated with 1,6-diphenyl-1,3,5-hexatriene. The orientation of the poly[6-methacryloyloxyhexyl phosphorylcholine (MHPC)] which has six methylene chains between the phospholipid polar group and the backbone was higher than that of other poly(MAPC)s. The mobility of the poly(MAPC) decreased with an increase in the methylene chain length in the MAPC unit. The fibronectin adsorption on the gradient PE sheet grafted with poly(MAPC) was determined with enzyme-labeled **immunoassay**. The amount of adsorbed fibronectin on the PE grafted with poly[2-methacryloyloxyethyl phosphorylcholine(MPC)] and poly(MHPC) decreased with an increase in their surface d. Especially, the PE sheet grafted with the poly(MHPC) was effectively reduced compared with other poly(MAPC)s. On the poly[10-methacryloyloxydecyl (MDPC)], there is a min. amount of adsorbed

fibronectin. The fibronectin adsorption pattern on the PE sheet grafted with poly(MAPC) was quite different from the chemical structure of the MAPC unit. The human normal diploid fibroblasts (WI-38 cells) were cultured on the gradient PE sheet grafted with poly(MAPC) changing the concentration of seeded WI-38 cells. The adhesion behavior of the WI-38 cells was different depending on the concentration of the seeded WI-38 cells. When the concentration was low, the number of the adherent WI-38 cells had the same tendency

as fibronectin adsorption. The gradient PE sheet grafted with the poly(MHPC) effectively reduced WI-38 cells adhesion even when the concentration of the WI-38 cells was high. The biocompatibility of polymer surfaces can be improved by highly oriented phosphorylcholine group.

CC 63-7

ST Miscellaneous Descriptors

polyethylene graft phosphorylcholine methacrylate; fibroblast adhesion
polyethylene graft phosphorylcholine methacrylate; fibronectin
absorption polyethylene graft phosphorylcholine methacrylate

RN 252877-49-9; 252877-50-2; 252877-51-3

L82 ANSWER 35 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 14

ACCESSION NUMBER: 1999:214849 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA13208098101A

TITLE: Inhibition of fibroblast cell adhesion on substrate by
coating with 2-methacryloyloxyethylphosphorylcholine
polymersAUTHOR(S): Ishihara, Kazuhiko; Ishikawa, Eri; Iwasaki, Yasuhiko;
Nakabayashi, NobuoCORPORATE SOURCE: Department of Materials Science, Graduate School of
Engineering, The University of Tokyo, Tokyo, 113-8656,
Japan.SOURCE: Journal of Biomaterials Science, Polymer Edition, (1999)
Vol. 10, No. 10, pp. 1047-1061.
CODEN: JBSEEA. ISSN: 0920-5063.

COUNTRY: JAPAN

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 1999:784811

LANGUAGE: English

ENTRY DATE: Entered STN: 20011116

Last Updated on STN: 20020403

ED Entered STN: 20011116

Last Updated on STN: 20020403

AB Fibroblast adhesion and growth behavior were examined on various polymers coated on a poly(ethylene terephthalate) (PET) substrate. The polymers used were poly[2-methacryloyloxyethylphosphorylcholine (MPC)-co-Bu methacrylate] copolymer (PMB)s with different MPC unit compns., and poly(2-hydroxyethyl methacrylate). Surface anal. by dynamic contact angle measurement revealed that the mobility of the polymer chain on the PET substrate depended on the MPC unit composition, but there was no significant difference between the PMBs with 3-10 mol% MPC units and poly(HEMA). Fibronectin adsorption on the polymer surface from a cell culture medium was determined by immunoassay. The adsorbed fibronectin was evenly distributed in every polymer, however, the amount was reduced with an increase in the MPC unit composition in the PMB. This result suggested that the MPC unit could weaken the interaction between the polymer surface and proteins. When fibroblast L-929 cells, were cultured on the polymers, the cells adhered and the number of cells increased on not only the hydrophobic poly(BMA) but also on the hydrophilic poly(HEMA). However, the number of cells that adhered on the PMB surface decreased with an increase in the

MPC unit composition. This was a result of the fibronectin adsorption behavior. Thus, it could be concluded that since the PMB could suppress cell adhesion proteins e.g. fibronectin, the PMB showed excellent cell adhesive resistance properties.

CC 63-7

ST Miscellaneous Descriptors

fibroblast adhesion inhibition methacryloyloxyethylphosphorylcholine polymer coating

RN 125275-25-4 (Butyl methacrylate-2-methacryloyloxyethylphosphorylcholine copolymer)

25038-59-9 (PET)

25249-16-5 (Poly(2-hydroxyethyl methacrylate))

L82 ANSWER 36 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 16

ACCESSION NUMBER: 1998:191577 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA13006071466V

TITLE: Reduced protein adsorption on novel phospholipid polymers

AUTHOR(S): Ishihara, Kazuhiko; Iwasaki, Yasuhiko

CORPORATE SOURCE: Department of Materials Science, Graduate School of Engineering, The University of Tokyo, Tokyo, 113-8656, Japan.

SOURCE: Journal of Biomaterials Applications, (1998) Vol. 13, No. 2, pp. 111-127.

CODEN: JBAPEL ISSN: 0885-3282.

COUNTRY: JAPAN

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 1998:638100

LANGUAGE: English

ENTRY DATE: Entered STN: 20011116

Last Updated on STN: 20020509

ED Entered STN: 20011116

Last Updated on STN: 20020509

AB We have synthesized phospholipid polymers containing 2-methacryloyloxyethyl phosphorylcholine (MPC) units as novel blood compatible polymers and have evaluated their interactions with blood components. It was found that in the absence of anticoagulants, blood clotting was delayed and blood cell adhesion and activation were effectively prevented on the MPC copolymer surface. A little amount of protein adsorbed on the MPC copolymer from human plasma was compared with conventional polymers, and the amount was reduced with increasing MPC unit fraction. To clarify the reason for the little protein adsorption on the MPC copolymer, the water structure in the hydrated polymer was examined with attention to the free water fraction. Hydration of the polymers occurred when they were immersed in water. The thermal anal. of these hydrated polymers revealed that the free water fractions in the poly(MPC-co-Bu methacrylate(BMA)) and poly(MPC-co-n-dodecyl methacrylate) were significantly larger than those in the poly(2-hydroxyethyl methacrylate) (HEMA). The conformation of proteins adsorbed on poly(HEMA) changed considerably but that on poly(MPC-co-BMA) was almost the same as the native state. We concluded from these results that the proteins are hardly adsorbed and do not change their original conformation on the polymer surfaces which possess a high free water fraction such as phospholipid polymers.

CC 63-7

ST Miscellaneous Descriptors

protein adsorption phospholipid polymer methacrylate

RN 125275-25-4 (3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate)

144514-07-8 (3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium,
 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with
 dodecyl 2-methyl-2-propenoate)
 9003-63-8 (Poly(butyl methacrylate))
 25249-16-5 (Poly(2-hydroxyethyl methacrylate))
 67881-98-5 (2-Methacryloyloxyethyl phosphorylcholine)

L82 ANSWER 37 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 17
 ACCESSION NUMBER: 1995:55014 TOXCENTER
 DOCUMENT NUMBER: PubMed ID: 7622528
 TITLE: Adhesion and cytokine production by monocytes on
 poly(2-methacryloyloxyethyl phosphorylcholine-co-alkyl
 methacrylate)-coated polymers
 AUTHOR(S): DeFife K M; Yun J K; Azeez A; Stack S; Ishihara K;
 Nakabayashi N; Colton E; Anderson J M
 CORPORATE SOURCE: Department of Pathology, Case Western Reserve University,
 Cleveland, Ohio 44106, USA
 CONTRACT NUMBER: HL 33849 (NHLBI)
 HL 48771 (NHLBI)
 SOURCE: Journal of biomedical materials research, (1995 Apr) 29
 (4) 431-9.
 Journal Code: 0112726. ISSN: 0021-9304.
 COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 FILE SEGMENT: MEDLINE
 OTHER SOURCE: MEDLINE 95348144
 LANGUAGE: English
 ENTRY DATE: Entered STN: 20011116
 Last Updated on STN: 20011116
 ED Entered STN: 20011116
 Last Updated on STN: 20011116
 AB Human monocytes isolated from peripheral venous blood were assayed
 for their ability to adhere to various polymers. The culture supernatants
 were also assayed for the cytokines, interleukin-1 beta
 (IL-beta), interleukin-6 (IL-6), and tumor necrosis factor-alpha
 (TNF-alpha). The polymers evaluated for adherence and cytokine production
 included Pellethane, polyethylene and poly[n-butyl methacrylate (BMA)]
 coated with poly[2-methacryloyloxyethyl phosphorylcholine (MPC)-co-alkyl
 methacrylate] copolymers. In some experiments the test polymers were
 adsorbed with fibrinogen or IgG prior to the addition of monocytes. MPC
 copolymer-coated materials inhibited monocyte and macrophage adhesion
 after 1 and 8 days of culture relative to corresponding uncoated polymers
 and tissue culture polystyrene (TCPS). The degree of inhibition by coated
 Pellethane compared to uncoated Pellethane was the greatest, while
 inhibition of adhesion by coated poly(BMA) was the least compared to
 uncoated poly(BMA). However, adhesion was significantly decreased on both
 coated and uncoated poly(BMA) by day 8. While IL-1 beta, IL-6, and
 TNF-alpha release was variably influenced by polymer coating, release was
 consistently inhibited relative to TCPS on day 1. However, cytokine
 production was not inhibited compared to corresponding uncoated polymers
 on day 1. With or without protein preadsorption, IL-1 beta release was
 not detectable in the supernatants of any polymer on day 8, IL-6
 production was diminished on day 8, and TNF-alpha production was sustained
 on day 8. Overall, MPC copolymer-coated and uncoated poly(BMA) were the
 least stimulating, while TCPS was the most stimulating. (ABSTRACT TRUNCATED
 AT 250 WORDS)
 CT Biocompatible Materials
 Cell Adhesion
 Cells, Cultured
 Humans

*Interleukin-1: SE, secretion
 *Interleukin-6: SE, secretion
 *Methacrylates
 *Monocytes: CY, cytology
 *Phosphorylcholine: AA, analogs & derivatives

Polymethacrylic Acids

Polystyrenes

Polyurethanes

Research Support, U.S. Gov't, Non-P.H.S.

Research Support, U.S. Gov't, P.H.S.

Surface Properties

*Tumor Necrosis Factor-alpha: SE, secretion

RN 107-73-3 (Phosphorylcholine)

125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate))

9003-63-8 (polybutyl methacrylate)

CN 0 (Biocompatible Materials); 0 (Interleukin-1); 0 (Interleukin-6); 0 (Methacrylates); 0 (Polymethacrylic Acids); 0 (Polystyrenes); 0 (Polyurethanes); 0 (Tumor Necrosis Factor-alpha)

L82 ANSWER 38 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:77416 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA14223435647T

TITLE: Structural Study of DNA Condensation Induced by Novel Phosphorylcholine-Based Copolymers for Gene Delivery and Relevance to DNA Protection

AUTHOR(S): Chim, Y. T. A.; Lam, J. K. W.; Ma, Y.; Armes, S. P.; Lewis, A. L.; Roberts, C. J.; Stolnik, S.; Tendler, S. J. B.; Davies, M. C.

CORPORATE SOURCE: Laboratory of Biophysics and Surface Analysis, School of Pharmacy, The University of Nottingham, Nottingham, NG7 2RD, UK.

SOURCE: Langmuir, (2005) Vol. 21, No. 8, pp. 3591-3598.
 CODEN: LANGD5. ISSN: 0743-7463.

COUNTRY: UNITED KINGDOM

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 2005:180198

LANGUAGE: English

ENTRY DATE: Entered STN: 20050308
 Last Updated on STN: 20050531

ED Entered STN: 20050308

Last Updated on STN: 20050531

AB Poly[2-(dimethylamino)ethyl methacrylate-b-2-methacryloyloxyethyl phosphorylcholine] (DMA-MPC) is currently under investigation as a new vector candidate for gene therapy. The DMA block has been previously demonstrated to condense DNA effectively. The MPC block contains a phosphorylcholine (PC) headgroup, which can be found naturally in the outside of the cell membrane. This PC-based polymer is extremely hydrophilic and acts as a biocompatible steric stabilizer. In this study, we assess in detail the morphologies of DNA complexes obtained using the diblock copolymer series DMAxMPC30 (where the mean d.p. of the MPC block was fixed at 30 and the DMA block length was systematically varied) using TEM and liquid atomic force microscopy (AFM). Both techniques indicate more compact complex morphologies (more efficient condensation) as the length of the cationic DMA block increases. However, the detailed morphologies of the DMAxMPC30-DNA complexes observed by TEM in vacuo and by AFM in aqueous medium are different. This phenomena is believed to be related to the highly hydrophilic nature of the MPC block. TEM studies revealed that the

morphol. of the complexes changes from loosely condensed structures to highly condensed rods, toroids, and oval-shaped particles as the DMA moiety increases. In contrast, morphol. changes from plectonemic loops to flowerlike and rectangular blocklike structures, with an increase in highly condensed central regions, are observed by in situ AFM studies. The relative population of each structure is clearly dependent on the polymer mol. composition. Enzymic degradation assays revealed that only the DMA homopolymer provided effective DNA protection against DNase I degradation, while other highly condensed copolymer complexes, as judged from TEM and gel electrophoresis, only partially protected the DNA. However, AFM images indicated that the same highly condensed complexes have less condensed regions, which we believe to be the initiation sites for enzymic attack. This indicates that the open structures observed by AFM of the DNA complexation by the DMAxMPC30 copolymer series are closer to in vivo morphol. when compared to TEM.

CC 63-6

ST Miscellaneous Descriptors

DNA phosphorylcholine copolymer gene delivery

RN 409334-34-5 (2-(Dimethylamino)ethyl methacrylate-2-methacryloyloxyethyl phosphorylcholine block copolymer)

L82 ANSWER-39 OF .70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:246857 TOXCENTER

COPYRIGHT: Copyright (c) 2005 The Thomson Corporation

DOCUMENT NUMBER: 42-16504

TITLE: Novel biocompatible phosphorylcholine-based self-assembled nanoparticles for drug delivery

AUTHOR(S): Salvage, JP; Rose, SF; Phillips, GJ; Lloyd, AW; Lewis, AL; et al

CORPORATE SOURCE: Univ Brighton, Sch Pharm & Biomol Sci, Moulsecoomb, Brighton BN2 4GJ, E Sussex, England

SOURCE: Journal of Controlled Release (Netherlands), (2005) Vol. 104, pp. 259-270. 35 Refs.

CODEN: JCREEC. ISSN: 0168-3659.

DOCUMENT TYPE: Journal

FILE SEGMENT: IPA

OTHER SOURCE: IPA 2005:16478

LANGUAGE: English

ENTRY DATE: Entered STN: 20050920

Last Updated on STN: 20050920

ED Entered STN: 20050920

Last Updated on STN: 20050920

AB Major challenges associated with nano-sized drug delivery systems include removal from systemic circulation by phagocytic cells and controlling appropriate drug release at target sites. 2-methacryloyloxyethyl phosphorylcholine (MPC) has been copolymerised in turn with two pH responsive comonomers (2-(diethylamino)ethyl methacrylate (DEA) and 2-(diisopropylamino)ethyl methacrylate (DPA), to develop novel biocompatible drug delivery vehicles. Micelles were prepared from a series of copolymers with varying block compositions and their colloidal stability and dimensions were assessed over a range of solution pH using photon correlation spectroscopy. The drug loading capacities of these micelles were evaluated using Orange OT dye as a model compound. The cytotoxicity of the micelles was assessed using an in vitro assay. The MPC-DEA diblock copolymers formed micelles at around pH 8 and longer DEA block lengths allowed higher drug loadings. However, these micelles were not stable at physiological pH. In contrast, MPC-DPA diblock copolymers formed micelles of circa 30 nm diameter at physiological pH. In vitro assays indicated that these MPC-DPA diblock copolymers had negligible cytotoxicities. Thus novel non-toxic

biocompatible micelles of appropriate size and good colloidal stability with pH-modulated drug uptake and release can be readily produced using MPC-DPA diblock copolymers. (C) 2005 Elsevier B.V All rights reserved.

SC 9 Pharmaceutics

ST Miscellaneous Descriptors

2-Methacryloyloxyethyl phosphorylcholine; micelles
 2-(Diisopropylamino)ethyl methacrylate; micelles
 N,N-Diethylaminoethyl methacrylate; micelles
 Nanoparticles; 2-methacryloyloxyethyl phosphorylcholine
 Copolymers; 2-methacryloyloxyethyl phosphorylcholine
 Stability; 2-methacryloyloxyethyl phosphorylcholine
 Micelles; 2-methacryloyloxyethyl phosphorylcholine
 Particle size; 2-methacryloyloxyethyl phosphorylcholine
 Toxicity; 2-methacryloyloxyethyl phosphorylcholine
 Nanoparticles; 2-(diisopropylamino)ethyl methacrylate
 Copolymers; 2-(diisopropylamino)ethyl methacrylate
 Stability; 2-(diisopropylamino)ethyl methacrylate
 Micelles; 2-(diisopropylamino)ethyl methacrylate
 Particle size; 2-(diisopropylamino)ethyl methacrylate
 Toxicity; 2-(diisopropylamino)ethyl methacrylate
 Nanoparticles; n,n-diethylaminoethyl methacrylate
 Copolymers; n,n-diethylaminoethyl methacrylate
 Stability; n,n-diethylaminoethyl methacrylate
 Micelles; n,n-diethylaminoethyl methacrylate
 Particle size; n,n-diethylaminoethyl methacrylate
 Toxicity; n,n-diethylaminoethyl methacrylate

RN 67881-98-5 (2-Methacryloyloxyethyl phosphorylcholine)
 16715-83-6 (2-(Diisopropylamino)ethyl methacrylate)
 105-16-8 (N,N-Diethylaminoethyl methacrylate)

L82 ANSWER 40 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:44317 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA14218341817W

TITLE: In situ modification on cellulose acetate hollow fiber membrane modified with phospholipid polymer for biomedical application

AUTHOR(S): Ye, Sang Ho; Watanabe, Junji; Iwasaki, Yasuhiko; Ishihara, Kazuhiko

CORPORATE SOURCE: Department of Materials Engineering, School of Engineering, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-8656, Japan.

SOURCE: Journal of Membrane Science, (2005) Vol. 249, No. 1-2, pp. 133-141.

CODEN: JMESDO. ISSN: 0376-7388.

COUNTRY: JAPAN

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 2005:124799

LANGUAGE: English

ENTRY DATE: Entered STN: 20050215

Last Updated on STN: 20050426

ED Entered STN: 20050215

Last Updated on STN: 20050426

AB The hollow fiber membrane (HFM) made from synthetic polymers need improvement in terms of hemocompatibility or biocompatibility, for use in the medical field. In this study, cellulose acetate (CA) HFM modified with the water-soluble amphiphilic 2-methacryloyloxyethyl phosphorylcholine (MPC) copolymer (poly (MPC-co-Bu methacrylate) (PMB80, MPC:BMA = 80:20 (mol%)) was prepared by a dry-jet wet spinning process. The PMB80 was

coated on the CA HFM surface *in situ* during the phase inversion of the dope solution by using a PMB80 solution as an inner **coagulant**. The CA/PMB80 coating HFM showed no phys. structure changes in comparison with the CA HFM prepared using the same preparative conditions. The structure and permeability of the CA/PMB80 coating HFM was controllable by changing the preparative conditions. From the results of the X-ray photoelectron spectroscopic (XPS) observations, the amount of modification was changed with the concentration of PMB80 in the **coagulant**. The XPS signal attributed to the phosphorus atom of the PMB80 remained even after 1 mo of rinsing with distilled water. Also, the CA/PMB80 coated HFM showed good permeability and a low membrane fouling property in comparison with the non-modified CA HFM, due to the low protein adsorption property of the PMB80.

CC 63-8

ST Miscellaneous Descriptors

cellulose acetate hollow fiber membrane phospholipid polymer biomedical

RN 125275-25-4 (Butyl methacrylate-2-methacryloyloxyethyl phosphorylcholine copolymer)

RN 9004-35-7

L82 ANSWER 41 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:108846 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA14118296374R

TITLE: Amphiphilic block copolymers based on poly(2-acryloyloxyethyl phosphorylcholine) prepared via RAFT polymerisation as biocompatible nanocontainers

AUTHOR(S): Stenzel, Martina H.; Barner-Kowollik, Christopher; Davis, Thomas P.; Dalton, Helen M.

CORPORATE SOURCE: Centre for Advanced Macromolecular Design, School of Chemical Engineering and Industrial Chemistry, The University of New South Wales, Sydney, NSW 2031, Australia.

SOURCE: Macromolecular Bioscience, (2004) Vol. 4, No. 4, pp. 445-453.

CODEN: MBAIBU. ISSN: 1616-5187.

COUNTRY: AUSTRALIA

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 2004:371833

LANGUAGE: English

ENTRY DATE: Entered STN: 20040511

Last Updated on STN: 20041229

ED Entered STN: 20040511

Last Updated on STN: 20041229

AB Amphiphilic block copolymers composed of poly(Bu acrylate) and poly(2-acryloyloxyethyl phosphorylcholine) have been prepared using reversible addition fragmentation transfer (RAFT) polymerization. The conversion of the polymerization was determined using online FT NIR spectroscopy. NMR spectroscopy

was used not only to support the results obtained from FT NIR spectroscopy but also prove the formation of micelles. Due to the strong aggregation tendency of these block copolymers and the resulting difficulties concerning the mol. weight anal. test expts. were carried out replacing poly(2-acryloyloxyethyl phosphorylcholine) with poly(2-hydroxyethyl acrylate). Micelle size and the aggregation behavior were investigated using dynamic light scattering. The sizes of the nanocontainers obtained were found to be influenced by the block length as well as the solvent leading to micelles in the range between 40 and 160 nm. The toxicity of

the RAFT agent used was then analyzed by cell growth inhibition tests.
 CC 35-7
 ST Miscellaneous Descriptors
 RAFT polymn block amphiphilic polyacrylate synthesis; aggregation
 micelle hydrodynamic radius acryloyloxyethyl phosphorylcholine block
 copolymer; cytotoxicity assay phenylmethylthioxomethylthi
 o propanoic acid RAFT initiator
 RN 765206-20-0 (Butyl acrylate-2-acryloyloxyethyl phosphorylcholine
 diblock copolymer)
 765276-02-6 (Butyl acrylate-2-hydroxyethyl acrylate diblock copolymer)
 RN 497931-76-7

L82 ANSWER 42 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:84930 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA14115248491E
 TITLE: Phosphorylcholine-containing polymers for use in cell
 encapsulation
 AUTHOR(S): Yang, Ying; Zhang, Sifu; Jones, Graham; Morgan, Noel; El
 Haj, Alicia J.
 CORPORATE SOURCE: Centre for Science and Technology in Medicine, School of
 Medicine, Keele University/University Hospital of North
 Staffordshire, Stoke-on-Trent, Staffs, UK.
 SOURCE: Artificial Cells, Blood Substitutes, and Biotechnology,
 (2004) Vol. 32, No. 1, pp. 91-104.
 CODEN: ACBSDA.
 COUNTRY: UNITED KINGDOM
 DOCUMENT TYPE: Journal
 FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 2004:278630
 LANGUAGE: English
 ENTRY DATE: Entered STN: 20040413
 Last Updated on STN: 20041229

ED Entered STN: 20040413
 Last Updated on STN: 20041229
 AB A model system for encapsulation of pancreatic islets which has potential
 properties for improving biocompatibility and **immunosuppression**
 was investigated. In vitro and in vivo studies have shown that
 phosphorylcholine-containing polymers have high biocompatibility due to low
 adsorption of proteins and reduced thrombus formation. Encapsulation of
 islets isolated from rats with a compound membrane composed of
 phosphorylcholine-containing polymers and cellulose acetate led to rapid
 insulin production and diffusion across the membrane in response to glucose
 challenge. The phosphorylcholine-containing polymer had a mol. weight of about
 1.3 + 104 Da. The polymer-coated membrane excluded larger mols.
 such as IgG (mol. weight 150 kDa), thereby acting as a phys. **immuno**
 -barrier, but allowed smaller mols. such as glucose and insulin to pass
 through.

CC 63-5
 ST Miscellaneous Descriptors
 phosphorylcholine encapsulation pancreatic islet
 RN 9004-10-8 (Insulin)
 9004-35-7 (Cellulose acetate)
 125275-25-4 (2-MethacryloyloxyethylPhosphorylcholine-butyl
 methacrylate copolymer)

L82 ANSWER 43 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:149311 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA14103042760H

TITLE: In vitro and ex vivo blood compatibility study of 2-methacryloyloxyethyl phosphorylcholine (MPC) copolymer-coated hemodialysis hollow fibers

AUTHOR(S): Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko

CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Chiyoda-ku, Tokyo, 101-0062, Japan.

SOURCE: Journal of Artificial Organs, (2003) Vol. 6, No. 4, pp. 260-266.

CODEN: JAORFN. ISSN: 1434-7229.

COUNTRY: JAPAN

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 2003:1000315

LANGUAGE: English

ENTRY DATE: Entered STN: 20040707
Last Updated on STN: 20041214

ED Entered STN: 20040707
Last Updated on STN: 20041214

AB To identify the advantages of 2-methacryloyloxyethyl phosphorylcholine (MPC) copolymer-coated polysulfone (PSf) hollow fibers for hemodialyzer and hemofilter minimodules with hollow fibers were made and blood compatibility was evaluated in vitro and ex vivo. Three types of hollow fibers, i.e., pure PSf (no additives), PSf alloyed with poly(1-vinyl-2-pyrrolidone) (PVPy), and PSf coated with the MPC copolymer, were processed in wet conditions. Com. available hollow fibers (APS) were used as a control sample. The PSf hollow fibers have a condensed structure. A porous structure was observed when the PVPy was alloyed before wet processing, and no effect of the innercoated MPC copolymer on the porous structure was observed. One-tenth-sized minimodules of the conventional hemodialyzer were fabricated with 200 fibers each. The solute permeability of the hollow fibers was evaluated using 10% bovine serum in a buffer solution containing cytochrome C, which is a model protein of B2-microglobulin. After circulation for 2.5 h, the solute permeability of APS and PVPy-alloyed PSf hollow fibers decreased to 50% compared with their initial values. In contrast, the value for the hollow fibers innercoated with the MPC copolymer maintained its initial level. The inner surface of the dialysis membranes was observed with a transmission electron microscope and a layer of adsorbed protein on the PSf, APS, and PVPy-alloyed PSf hollow fibers was observed, but not on the MPC copolymer-coated fibers. Blood cell adhesion was then evaluated by circulation of whole rabbit blood without any anticoagulant ex vivo. Many adherent cells were observed on the PVPy-alloyed PSf hollow fibers; however, blood cells did not adhere or aggregate on the MPC copolymer-coated hollow fibers. From these results, we concluded that the in-situ coating of MPC copolymer on PSf hollow fibers is effective in preventing blood coagulation and maintaining the solute permeability of the fibers.

CC 63-7

ST Miscellaneous Descriptors
 blood compatibility methacrylic phosphorylcholine copolymer polysulfone
 hemodialysis hollow fiber

RN 9007-43-6 (Cytochrome C)
 9003-39-8 (Poly(1-vinyl-2-pyrrolidone))

RN 393587-07-0

L82 ANSWER 44 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:306221 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA14009133678H

TITLE: Nonthrombogenic hemodialyzer with MPC copolymer
 AUTHOR(S): Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko
 CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo
 Medical and Dental University, Kanda-surugadai,
 Chiyoda-ku, Tokyo, 101-0062, Japan.
 SOURCE: Advances in Science and Technology (Faenza, Italy), (2003)
 Vol. 41, No. Materials in Clinical Applications VI, pp.
 161-170.

CODEN: ASETES5.

COUNTRY: JAPAN

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 2003:445247

LANGUAGE: English

ENTRY DATE: Entered STN: 20031230
 Last Updated on STN: 20050628

ED Entered STN: 20031230
 Last Updated on STN: 20050628

AB Development of non-thrombogenic dialysis membrane was aimed. Copolymers of 2-methacryloyloxyethyl phosphorylcholine (MPC) showed good hemocompatibility. They were introduced on the blood-contacting surface of hemodialysis cellulose and polysulfone membranes without adverse effect on mech. properties and permeability. Ex-vivo single pass of rabbit blood through the mini-modules without an anticoagulant was performed for 0.5 h and blood cells did not attach on the surface. It was concluded that the modified hollow fibers with MPC copolymers are promising to develop a hemodialyzer, which does not require anticoagulants.

MPC polymer surface could form self-assembled biomimetic membrane by accumulating phospholipids from blood stream and show non-thrombogenicity. MPC is available from NOF Co., in Tokyo.

CC 63-7

ST Miscellaneous Descriptors

methacryloyloxyethyl phosphorylcholine copolymer hemodialyzer membrane
 cellulose polysulfone blood biocompatibility; platelet antithrombogenic
 hemodialysis membrane implant methacryloyloxyethyl phosphorylcholine
 copolymer

RN 60-27-5 (Creatinine)

9007-43-6 (Cytochrome C)

67881-99-6 (2-Methacryloyloxyethyl-phosphorylcholine polymer)

9004-67-5 (Methyl cellulose)

RN 142146-61-0; 182816-96-2

L82 ANSWER 45 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:196361 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA13908122556V

TITLE: Preparation and blood compatibility of
 phosphorylcholine-bonded O-butyrylchitosan

AUTHOR(S): Zhu, Aiping; Shan, Bing; Yuan, Youling; Shen, Jian

CORPORATE SOURCE: Department of Polymer Science and Engineering, Nanjing
 University, Nanjing, 210093, Peop. Rep. China.

SOURCE: Polymer International, (2003) Vol. 52, No. 1, pp. 81-85.
 CODEN: PLYIEI. ISSN: 0959-8103.

COUNTRY: CHINA

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 2003:134342

LANGUAGE: English

ENTRY DATE: Entered STN: 20030812
 Last Updated on STN: 20030819

ED Entered STN: 20030812
 Last Updated on STN: 20030819
 AB 2-Methacryloyloxyethyl phosphorylcholine (MPCE) was synthesized using phosphorus trichloride, ethylene glycol, 2-hydroxyethyl methacrylate and triethylamine, and then used in the preparation of O-butyrylchitosan-bonded MPCE (MPCE-BCS) by Michael addition of MPCE to amino groups of O-butyrylchitosan. The structures of MPCE and MPCE-BCS were characterized by FTIR and 1H NMR. The blood-compatibility of MPCE-BCS was evaluated by means of blood clotting and platelet adhesion assays. The blood-clotting assay indicated that O-butyrylchitosan was haemocompatible. Both the blood-clotting assay and platelet adhesion assay confirmed that MPCE-BCS had excellent antithrombogenicity.

CC 63-5
 ST Miscellaneous Descriptors
 chitosan phosphorylcholine deriv blood compatibility
 anticoagulant
 RN 9012-76-4Q (Chitosan, reaction product with 2-Methacryloyloxyethyl phosphorylcholine)
 106-31-0 (Butyric anhydride)
 107-21-1 (Ethylene glycol)
 121-44-8 (Triethylamine)
 868-77-9 (2-Hydroxyethyl methacrylate)
 7719-12-2 (Phosphorus trichloride)
 9012-76-4 (Chitosan)
 822-39-9 (2-Chloro-1,3,2-dioxaphospholane)
 6609-64-9 (2-Chloro-2-oxo-1,3,2-dioxaphospholane)
 RN 312490-87-2; 124384-94-7; 82793-19-9

L82 ANSWER 46 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:171883 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA13322313528Y
 TITLE: Photoinduced graft polymerization of 2-methacryloyloxyethyl phosphorylcholine on polyethylene membrane surface for obtaining blood cell adhesion resistance
 AUTHOR(S): Ishihara, K.; Iwasaki, Y.; Ebihara, S.; Shindo, Y.; Nakabayashi, N.
 CORPORATE SOURCE: Graduate School of Engineering, Department of Materials Science, The University of Tokyo, Tokyo, 113-8656, Japan.
 SOURCE: Colloids and Surfaces, B: Biointerfaces, (2000) Vol. 18, No. 3,4, pp. 325-335.
 CODEN: CSBSEQ. ISSN: 0927-7765.
 COUNTRY: JAPAN
 DOCUMENT TYPE: Journal
 FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 2000:507676
 LANGUAGE: English
 ENTRY DATE: Entered STN: 20011116
 Last Updated on STN: 20020409

ED Entered STN: 20011116
 Last Updated on STN: 20020409
 AB Phospholipid polymer, poly[2-methacryloyloxyethyl phosphorylcholine (MPC)], was grafted with polyethylene (PE) membrane using photoinduced polymerization technique to make the membrane resistant to cell adhesion. The water contact angle on the PE membrane grafted with poly(MPC) decreased with an increase in the photopolymn. time. This decrease corresponded to the increase in the amount of poly(MPC) grafted on the PE surface. The same graft polymerization procedure was applied using other hydrophilic monomers, such

as acrylamide (AAm), N-vinylpyrrolidone (VPy) and methacryloyl poly(ethylene glycol) (MPEG). These monomers were also polymerized to form grafted chains on the PE membrane, and the grafting was confirmed with XPS. Anal. of amount and distribution of plasma proteins at the plasma-contacting surface of the original and the modified PE membranes were analyzed using **immunogold assay**. The grafting of poly(MPC) and poly(VPy) on PE membrane reduced the plasma protein adsorption significantly compared with that on the original PE membrane. However, the PE membranes grafted with poly(AAm) or poly(MPEG) did not show any effects on protein adsorption. Platelet adhesion on the original and modified PE membranes from platelet-rich plasma was also examined. A large number of platelets adhered and activated on the original PE membrane. Grafting with poly(AAm) did not suppress platelet adhesion, but grafting with poly(MPC) or poly(VPy) on the PE membrane was effective in preventing platelet adhesion. It is concluded that the introduction of the phosphorylcholine group on the surface could decrease the cell adhesion to substrate polymer.

CC 63-7

ST Miscellaneous Descriptors

photopolymer methacryloxyloxyethyl phosphorylcholine polyethylene biocompatibility; blood adhesion photopolymer

methacryloxyloxyethylphosphorylcholine polyethylene

RN 108144-73-6 (3,5,8-Trioxa-4-phosphoheptadec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-propenamide, graft)

252877-49-9 (3,5,8-Trioxa-4-phosphoheptadec-10-en-1-aminium,

4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethene, graft)

RN 176587-89-6; 220830-40-0

L82 ANSWER 47 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:129717 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA13625390798A

TITLE: Bioinspired phospholipid polymer biomaterials for making high performance artificial organs

AUTHOR(S): Ishihara, K.

CORPORATE SOURCE: Department of Materials Science, Graduate School of Engineering, The University of Tokyo, Tokyo, 113-8656, Japan.

SOURCE: Science and Technology of Advanced Materials, (2000) Vol. 1, No. 3, pp. 131-138.

CODEN: STAMCV. ISSN: 1468-6996.

COUNTRY: JAPAN

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 2001:678942

LANGUAGE: English

ENTRY DATE: Entered STN: 20020612
Last Updated on STN: 20020618

ED Entered STN: 20020612

Last Updated on STN: 20020618

AB A review. Novel polymer biomaterials, which can be used in contact with blood, are prepared with strong inspiration from the surface structure of biomembrane. That is, the polymers with a phospholipid polar group in the side chain, 2-methacryloxyloxyethyl phosphorylcholine (MPC) polymers were synthesized. The MPC polymers can inhibit surface-induced clot formation effectively, when they are in contact with blood even in the absence of an anticoagulant. This phenomenon was due to the reduction of plasma protein and suppression of denaturation of adsorbed proteins, that is the

MPC polymers interact with blood components very mildly. As the mol. structure of the MPC polymer was easily designed by changing the monomer units and their composition, it could be applied to surface modification of artificial organs and biomedical devices for improving blood and tissue compatibility. Thus, the MPC polymers are useful polymer biomaterials for manufacturing high performance artificial organs and biomedical devices to provide safe medical treatments.

CC 63-0

ST Miscellaneous Descriptors

review phospholipid polymer biomaterial; methacryloyloxyethyl phosphocholine polymer biomaterial review

RN 67881-99-6 (Poly(2-methacryloyloxyethylphosphocholine))

L82 ANSWER 48 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:156977 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA13324340029T

TITLE: Control of cell adhesion and proliferation on MPC-BMA copolymer surface

AUTHOR(S): Watanabe, Akihiko; Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko

CORPORATE SOURCE: Dep. of Org. Mater., Div. of Biomater. Inst. of Biomater. and Bioeng., Tokyo Med. and Dent. Univ., Japan.

SOURCE: Seitai Zairyo Kogaku Kenkyusho Hokoku (Tokyo Ika Shika Daigaku), (2000) Vol. 33, pp. 38-43.

CODEN: SZKHF9.

COUNTRY: JAPAN

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 2000:393744

LANGUAGE: Japanese

ENTRY DATE: Entered STN: 20011116

Last Updated on STN: 20020403

ED Entered STN: 20011116

Last Updated on STN: 20020403

AB A review with 12 refs. For many medical applications of biomaterials, reduction or elimination of cell adhesion is desirable to enhance biocompatibility (Drumheller and Hubell, 1995). Adhesion of cells to an implant surface results from the protein adsorbed there. If protein adsorption can be prevented, cellular attachment will be suppressed. Copolymers of methacryloyloxyethyl phosphorylcholine (MPC) have affinity for phospholipids due to the phosphorylcholine polar groups on the MPC copolymer surface (Ishihara et al., 1990). When MPC copolymers are placed in contact with plasma, phospholipids are adsorbed and accumulated. They rearrange to create an organized layer which interacts mildly with proteins, thus preventing the adsorption of proteins on the material surface (Ishihara et al., 1992). The organized lipid layer on the material mimics a biomembrane surface. MPC copolymers have been investigated for blood-contacting applications and were found to possess excellent resistance against protein and platelet adhesion when exposed to platelet-rich plasma and whole blood even in the absence of an anticoagulant (Ishihara et al., 1991 and 1992). These copolymers may be suitable to for improving implant surfaces in applications where inhibition of cellular attachment is desired. In the present study, the adhesion of fibroblast cells in vitro to surfaces coated with an MPC copolymer was examined in comparison with a non-coated surface.

CC 63-0

ST Miscellaneous Descriptors

review biocompatible implant methacryloyloxyethylphosphorylcholine copolymer

RN 125275-25-4

L82 ANSWER 49 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1999:184688 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA13124327452Q
 TITLE: Modification of polysulfone with phospholipid polymer for improvement of the blood compatibility. Part 2. Protein adsorption and platelet adhesion
 AUTHOR(S): Ishihara, Kazuhiko; Fukumoto, Kikuko; Iwasaki, Yasuhiko; Nakabayashi, Nobuo
 CORPORATE SOURCE: Department of Materials Science, Graduate School of Engineering, The University of Tokyo, Tokyo, 113-8656, Japan.
 SOURCE: Biomaterials, (1999) Vol. 20, No. 17, pp. 1553-1559.
 CODEN: BIMADU. ISSN: 0142-9612.
 COUNTRY: JAPAN
 DOCUMENT TYPE: Journal
 FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 1999:569969
 LANGUAGE: English
 ENTRY DATE: Entered STN: 20011116
 Last Updated on STN: 20020509
 ED Entered STN: 20011116
 Last Updated on STN: 20020509
 AB Protein adsorption and platelet adhesion from human plasma on polysulfone (PSf) membranes modified with 2-methacryloyloxyethyl phosphorylcholine (MPC) polymer were studied. The modification was carried out by blending of the MPC polymer in the PSf. The amount of protein adsorbed on the PSf/MPC polymer blend membrane was significantly decreased with an increase in the composition of the blended MPC polymer. The distribution of the specific proteins adsorbed on the membrane surface was also determined by a gold-colloid immunoassay. Albumin, γ -globulin and fibrinogen were observed on every membrane surface after contact with plasma. However, in the case of the blended membrane, the d. of the adsorbed proteins decreased compared with that of original PSf membrane. That is, the MPC polymer blended in the membrane could function as a protein-adsorption-resistant additive. The number of platelets adhered on the PSf membrane was reduced, and change in the morphol. of adherent platelets was also suppressed by the modification with the MPC polymer. Therefore, the PSf/MPC polymer blend membrane had improved blood compatibility compared with the PSf membrane.
 CC 63-7
 ST Miscellaneous Descriptors
 polysulfone membrane phospholipid polymer biocompatibility; protein adsorption polysulfone membrane phospholipid polymer; platelet adhesion polysulfone membrane phospholipid polymer
 RN 125275-25-4; 144514-07-8; 28776-63-8

L82 ANSWER 50 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1999:209043 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA13206069285H
 TITLE: The development of in vitro biocompatibility tests for the evaluation of intraocular biomaterials
 AUTHOR(S): Lloyd, A. W.; Dropcova, S.; Faragher, R. G. A.; Gard, P. R.; Hanlon, G. W.; Mikhalovsky, S. V.; Olliff, C. J.; Denyer, S. P.
 CORPORATE SOURCE: Drug Delivery & Biomaterials Research Group, School of Pharmacy and Biomolecular Sciences, University of

SOURCE: Brighton, Brighton, BN2 4GJ, UK.
 Journal of Materials Science: Materials in Medicine,
 (1999) Vol. 10, No. 10/11, pp. 621-627.
 CODEN: JSMMEL. ISSN: 0957-4530.

COUNTRY: UNITED KINGDOM
 DOCUMENT TYPE: Journal
 FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 1999:742634
 LANGUAGE: English
 ENTRY DATE: Entered STN: 20011116
 Last Updated on STN: 20020403

ED Entered STN: 20011116
 Last Updated on STN: 20020403

AB Recent developments in ocular implant technol. require the in vitro evaluation of ocular compatibility in early stage development programs. This requires an understanding and appreciation of the biol. interactions which occur in the ocular environment and their relevance with respect to the clin. complications associated with surgical implantation of devices. This paper describes the development of a series of clin. reflective in vitro assays for assessing the potential ocular compatibility of novel intraocular lens materials. *Staphylococcus epidermidis* attachment, fibrinogen adsorption, mouse embryo fibroblast 3T3 adhesion and proliferation, primary rabbit lens cell adhesion, human peripheral blood macrophage adhesion and granulocyte activation tests were employed to evaluate two widely used intraocular biomaterials poly(Me methacrylate) (PMMA) and silicone, and a novel biomimetic phosphorylcholine-based coating (PC). The performance of these materials in the in vitro assays was compared to their ability to reduce postoperative inflammation in vivo in a rabbit model. The results demonstrated that the in vitro assays described here are predictive of in vivo ocular compatibility. These assays offer a more relevant means of assessing the ocular compatibility of biomaterials than those presently required by the authorities for regulatory approval of medical devices and implants.

CC 63-7
 ST Miscellaneous Descriptors
 intraocular biomaterial biocompatibility polymer; cell adhesion
 intraocular biomaterial biocompatibility

RN 9011-14-7 (PMMA)
 67881-98-5Q (2-Methacryloyloxyethylphosphorylcholine, copolymers)

L82 ANSWER 51 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1999:148015 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA13110134558V
 TITLE: Competitive adsorption between phospholipid and plasma protein on a phospholipid polymer surface
 AUTHOR(S): Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Nakatani, Masako;
 Mihara, Takashi; Kurita, Kimio; Ishihara, Kazuhiko
 CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo
 Medical and Dental University, Tokyo, 101-0062, Japan.
 SOURCE: Journal of Biomaterials Science, Polymer Edition, / (1999)
 Vol. 10, No. 5, pp. 513-529.
 CODEN: JBSEEA. ISSN: 0920-5063.

COUNTRY: JAPAN
 DOCUMENT TYPE: Journal
 FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 1999:310610
 LANGUAGE: English
 ENTRY DATE: Entered STN: 20011116

Last Updated on STN: 20020423

ED Entered STN: 20011116

Last Updated on STN: 20020423

AB The competitive adsorption of proteins and phospholipids on ω -methacryloyloxyalkyl phosphorylcholine (MAPC) polymer was evaluated in this study. Albumin, fibrinogen, and dimyristoylphosphatidylcholine (DMPC) were used as model components. The amount of DMPC adsorbed on the MAPC polymers increased with an increase in the MAPC unit composition of the polymer. The methylene chain length of the MAPC unit was another factor influencing the DMPC adsorption when the MAPC unit composition of the MAPC polymer was low. The state of albumin and DMPC liposome adsorbed on the 2-methacryloyloxyethyl phosphorylcholine (MPC) polymer was determined by dynamic contact angle (DCA) measurement. The adsorption strength of albumin on the MPC polymer was weaker than that on the poly[n-Bu methacrylate (BMA)], i.e., the albumin was detached from the MPC polymer during the rinsing process. On the poly(BMA) surface, no difference in the shape of the DCA loops before and after contact with the DMPC liposomal suspension was observed. Fibrinogen adsorption on the MAPC polymer was detected by gold-colloid labeled immunoassay. The amount of fibrinogen adsorbed on every MAPC polymer surface was reduced by addition of the DMPC liposome in the fibrinogen solution. The number of platelets

adhered on the MAPC polymer was also decreased when the DMPC liposome was present in the fibrinogen solution during pretreatment. We concluded that phospholipids were preferentially adsorbed on the MAPC polymer surface compared with plasma protein and that the adsorbed phospholipids played an important role in showing an excellent blood compatibility on the MAPC polymer.

CC 63-7

ST Miscellaneous Descriptors

methacryloyloxyalkyl phosphorylcholine polymer adsorption phospholipid protein

RN 125275-25-4 (Butyl methacrylate-2-methacryloyloxyethyl phosphorylcholine copolymer)

18656-38-7 (Dimyristoylphosphatidylcholine)

RN 158760-97-5; 197913-20-5

L82 ANSWER 52 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:102775 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA12809102541F

TITLE: Zwitterionic and reactive group-containing vinyl polymers for blood-compatible surface coatings

AUTHOR(S): Bowers, Roderick W. J.; Jones, Stephen A.; Stratford, Peter W.; Charles, Stephen A.

CORPORATE SOURCE: ASSIGNEE: Biocompatibles Ltd.

PATENT INFORMATION: US 5705583 A 6 Jan 1998

SOURCE: (1998) U.S., 29 pp., Cont.-in-part of U.S. Ser. No. 175,348.

CODEN: USXXAM.

COUNTRY: UNITED KINGDOM

DOCUMENT TYPE: Patent

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 1998:31161

LANGUAGE: English

ENTRY DATE: Entered STN: 20011116

Last Updated on STN: 20020605

ED Entered STN: 20011116

Last Updated on STN: 20020605

AB Polymers of ≥ 1 radical polymerizable monomers have pendant groups

bearing a center of permanent pos. charge and other pendant groups capable of stably binding the polymer to a surface, addnl. reactive groups in the polymer may serve as points for attachment of ligands to the polymer. The polymers may contain pendant groups which bind the polymer to a surface by physisorption, covalent bonding or ionic interactions. Thus, a coating of poly(2(methacryloyloxyethyl)-2'(trimethylammonium)ethyl phosphate inner salt-n-dodecyl methacrylate) (1:2) applied to PVC tubing showed no effect on blood pumping with or without anticoagulant, compared to an untreated PVC tubing which required anticoagulant.

CC 35-4
 ST Miscellaneous Descriptors
 zwitterionic acrylic polymer coating; ammonium phosphate zwitterionic acrylic polymer; biocompatible coating acrylic inner salt polymer; dodecyl methacrylate copolymer coating; crosslinkable monomer zwitterionic acrylic polymer; blood compatible coating zwitterionic acrylic polymer
 RN 7719-12-2 (Phosphorous trichloride)
 7429-90-5 (Aluminum)
 9002-86-2 (PVC)
 9002-88-4 (Polyethylene)
 12597-69-2 (Steel)
 107-21-1 (1,2-Ethanediol)
 868-77-9 (2-Hydroxyethyl methacrylate)
 920-46-7 (Methacryloyl chloride)
 1120-71-4 (Propane sultone)
 25265-75-2 (Butanediol)
 41862-94-6 (Dodec-7-yn-1-ol)
 RN 144514-07-8; 144514-08-9; 146109-91-3;
 150120-09-5; 150120-10-8; 150120-11-9;
 150120-12-0; 150120-14-2; 150120-16-4;
 150120-17-5; 150120-18-6; 150120-19-7;
 166195-20-6; 201359-42-4; 201359-43-5;
 201359-44-6; 201425-85-6; 67881-98-5;
 150120-13-1; 150120-15-3; 150205-71-3; 822-39-9; 6609-64-9;
 82793-19-9; 92035-97-7; 144026-20-0; 144026-21-1; 150205-72-4; 818-61-1;
 2867-47-2; 30030-25-2

L82 ANSWER 53 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1999:114772 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA13024329064T
 TITLE: Preparation of phospholipid-accumulated surface for creation of a new biocompatible material
 AUTHOR(S): Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko
 CORPORATE SOURCE: Inst. Med. Dent. Eng., Tokyo Med. Dent. Univ., Tokyo, 101-0062, Japan.
 SOURCE: Iyo Kizai Kenkyusho Hokoku (Tokyo Ika Shika Daigaku), (1998) Vol. 32, pp. 14-22.
 CODEN: IKKHBS. ISSN: 0082-4739.
 COUNTRY: JAPAN
 DOCUMENT TYPE: Journal
 FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 1999:86719
 LANGUAGE: Japanese
 ENTRY DATE: Entered STN: 20011116
 Last Updated on STN: 20020521
 ED Entered STN: 20011116
 Last Updated on STN: 20020521
 AB A review with 28 refs. Chemical compds. having phospholipid polar groups are interesting from the viewpoint not only of polymer chemical, but also of

biol., medical, and life sciences. Phospholipids, one of the main components of biomembrane, form a bilayer structure used to construct a biomembrane. Recently, many researchers have been attempting to prepare a phospholipid-accumulated surfaces to develop a new biocompatible material using phospholipid liposome, self-assembling monolayer (SAM), or polymeric phospholipids. In this review, we report the preparation of phospholipid-accumulated surfaces and their properties. We also prepared a methacrylate having a phosphorylcholine group, 2-methacryloyloxyethyl phosphorylcholine (MPC), to make a new biocompatible polymeric material. The competitive adsorption of proteins and phospholipids on the MPC polymer was evaluated using albumin, fibrinogen, and dimyristoyl phosphatidylcholine (DMPC) as model components, resp. The amount of DMPC adsorbed on the MPC polymers increased with an increase in the MPC composition in the polymer. The state of albumin and DMPC liposome adsorbed on the MPC polymer was determined by dynamic contact angle (DCA) measurement. The albumin adsorbed on the MPC polymer was much easily detached compared with that on the poly(Bu methacrylate). On the poly(Bu methacrylate) surface, no difference in the shape of the DCA loops before and after contact with the DMPC liposomal suspension was observed. Fibrinogen adsorption on the MPC polymer was detected by gold-colloid labeled immunoassay. The amount of fibrinogen adsorbed on the MPC polymer surface with 10 mol% MPC was reduced by addition of the DMPC liposome in the fibrinogen solution. The application of MPC polymer for improving the tribol. property of elastomer, new material for orthopedic bearing, is also reported in this review. We concluded that the creation of a phospholipid-accumulated surface is very useful method for obtaining biocompatibility on biomedical polymers.

CC 63-0

ST Miscellaneous Descriptors

review phospholipid surface biocompatible medical goods

RN 67881-99-6 (2-Methacryloyloxyethyl phosphorylcholine polymer)

L82 ANSWER 54 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:191266 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA12719267962M

TITLE: Reduction of surface-induced platelet activation on phospholipid polymer

AUTHOR(S): Iwasaki, Yasuhiko; Mikami, Asako; Kurita, Kimio; Yui, Nobuhiko; Ishihara, Kazuhiko; Nakabayashi, Nobuo

CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Tokyo, 101, Japan.

SOURCE: Journal of Biomedical Materials Research, (1997) Vol. 36, No. 4, pp. 508-515.

CODEN: JBMRBG. ISSN: 0021-9304.

COUNTRY: JAPAN

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 1997:588729

LANGUAGE: English

ENTRY DATE: Entered STN: 20011116

Last Updated on STN: 20020618

ED Entered STN: 20011116

Last Updated on STN: 20020618

AB ω -Methacryloyloxyalkyl phosphorylcholine (MAPC) polymers which were synthesized with attention to the surface structure of a biomembrane show excellent blood compatibility, i.e., resistance to protein adsorption and blood cell adhesion. To clarify the stability of platelets in contact with the MAPC polymer surfaces, cytoplasmic free calcium concentration ([Ca²⁺]_i)

in the platelets was measured. A platelet suspension was passed through a column packed with various polymer beads after treatment with plasma, and the [Ca²⁺]_i in the platelets eluted from the column was measured. The [Ca²⁺]_i in contact with the MAPC polymers, i.e., poly[2-methacryloyloxyethyl phosphorylcholine-co-Bu methacrylate (BMA)] (PMEB) and poly(6-methacryloyloxyhexyl phosphorylcholine-co-BMA) (PMHB), was less than that in contact with poly(BMA). However, poly(10-methacryloyloxydecyl phosphorylcholine-co-BMA) (PMDB) was not effective in suppressing the increase in [Ca²⁺]_i, and thus was at the same level as in the poly(BMA). Platelets in contact with PMEB or PMHB were less activated compared with those in contact with PMDB and poly(BMA). The state of the platelets adhered to these polymer surfaces, both morphol. and immunol., was examined SEM observation of the polymer surface after contact with a platelet suspension revealed that many platelets adhered and changed their shape on the poly(BMA). The nos. of adherent platelets were reduced on all MAPC polymer surface. The relative amount of α -granule membrane glycoprotein (GMP-140) which appears on the cell membrane by activation of platelets on the PMEB surfaces was less than that on poly(BMA) and poly(2-hydroxyethyl methacrylate). Thus, PMEB and PMHB suppressed not only platelet adhesion but also activation of the platelets in contact with these surfaces.

CC 63-7

ST Miscellaneous Descriptors

phospholipid polymer surface platelet activation

RN 125275-25-4; 158760-97-5

L82 ANSWER 55 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:183031 TOXCENTER

COPYRIGHT: Copyright 2005 ACS

DOCUMENT NUMBER: CA12512150849X

TITLE: Preparation of self-assembled biomimetic membranes and
their functions

AUTHOR(S): Nakabayashi, Nobuo

CORPORATE SOURCE: Institute Medical and Dental Engineering, Tokyo Medical
and Dental University, Tokyo, 101, Japan.SOURCE: Advanced Biomaterials in Biomedical Engineering and Drug
Delivery Systems, [Ikutani Conference on Biomedical
Polymers], 5th, Kagoshima, Japan, Apr. 18-22, 1995, (1996)
pp. 193-197.

CODEN: 63CXA6.

COUNTRY: JAPAN

DOCUMENT TYPE: Conference

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 1996:470886

LANGUAGE: English

ENTRY DATE: Entered STN: 20011116

Last Updated on STN: 20020730

ED Entered STN: 20011116

Last Updated on STN: 20020730

AB A review, with 18 refs. New hypothesis to prepare nonthrombogenic materials has been proposed and the supporting evidence was discussed. That was a surface which could adsorb phospholipids, would be biocompatible and a methacrylate having affinity with phospholipids was designed.

2-Methacryloyloxyethyl phosphorylcholine (MPC) was prepared, copolymerd. with several monomers and their evaluation was carried out. It was found that polymers having phosphorylcholine groups, phospholipid polymers, have good affinity with phospholipids and could adsorb them on the surface.

Liposomal structure was kept when the phospholipid polymers were soaked in liposomal solution. The structure was identified by XPS, comparison of the gel-liquid crystalline transition temperature of phospholipid liposome with

differential scanning calorimetry, and desorption of phospholipids. Data suggested that self-assembled biomimetic membrane was prepared on the MPC copolymers. Their unusual but interesting property was inhibition of protein adsorption even in plasma solution and blood. They did not adsorb and activate platelets. Preparation of dialysis membranes which do not require anticoagulants is also possible. So it was concluded that MPC copolymers are promising basic biocompatible biomaterials.

CC 63-0
 ST Miscellaneous Descriptors
 review methacryloyloxyethyl phosphorylcholine membrane biomaterial
 RN 67881-98-5Q (2-Methacryloyloxyethyl phosphorylcholine, copolymers)

L82 ANSWER 56 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1994:121497 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA12008079736X
 TITLE: Biocompatible water-soluble cellulose derivatives, their manufacture and uses
 AUTHOR(S): Nakabayashi, Nobuo; Ishihara, Kazuhiko
 CORPORATE SOURCE: ASSIGNEE: NOF Corp.
 PATENT INFORMATION: WO 9316117 A1 19 Aug 1993
 SOURCE: (1993) PCT Int. Appl., 19 pp.
 CODEN: PIXXD2.
 COUNTRY: JAPAN
 DOCUMENT TYPE: Patent
 FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 1994:79736
 LANGUAGE: Japanese
 ENTRY DATE: Entered STN: 20011116
 Last Updated on STN: 20020917
 ED Entered STN: 20011116
 Last Updated on STN: 20020917
 AB The title cellulose derivs. are manufactured by grafting a water-soluble cellulose substrate with 2-methacryloyloxyethylphosphorylcholine (I), and are useful for dialysis membranes for purification of blood, etc. Thus, acetyloyating a cellulose powder with H₂SO₄-catalyzed Ac₂O in AcOH, and deacetylating the derivative with aqueous Na₂CO₃ and NaOH gave a water-soluble cellulose (II) which was then purified using membrane to remove low mol. weight products. Mixing 10 mL 0.5% aqueous solution of the purified II with 0.17 g ammonium Ce nitrate, 3 mL 0.1N HNO₃, then with 1.2 g I, and stirring under Ar for 1 h at 40° gave a grafted product (III) bearing 11.3% groups derived from I, and having mol. weight (polyethylene glycol-conversion, GPC-method-based) 1.4 + 105. Passing an aqueous solution of the III through viscose-derived hollow-fibers gave treated fibers bearing the III 8.6 µg/cm²; a dialysis module formed from the fibers showed low adhesion of platelets during purification of blood specimens.

CC 43-3
 ST Miscellaneous Descriptors
 anticoagulant cellulose methacryloyloxyethylphosphorylcholine
 graft manuf; dialysis membrane anticoagulant treatment
 cellulose graft
 RN 142146-61-0

L82 ANSWER 57 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1994:121480 TOXCENTER
 COPYRIGHT: Copyright 2005 ACS
 DOCUMENT NUMBER: CA12008078993S

TITLE: Biocompatible supported membranes useful for dialyzers,
 etc.
 AUTHOR(S): Kamo, Jun; Nakabayashi, Norio; Ishihara, Kazuhiko
 CORPORATE SOURCE: ASSIGNEE: Nakabayashi Norio
 PATENT INFORMATION: JP 93177119 A2 20 Jul 1993
 SOURCE: (1993) Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF.
 COUNTRY: JAPAN
 DOCUMENT TYPE: Patent
 FILE SEGMENT: CAPLUS
 OTHER SOURCE: CAPLUS 1994:78993
 LANGUAGE: Japanese
 ENTRY DATE: Entered STN: 20011116
 Last Updated on STN: 20020917
 ED Entered STN: 20011116
 Last Updated on STN: 20020917
 AB The title microporous membranes are derived from hydrophobic copolymers of (aliphatic hydrocarboxy)alkyl methacrylates and 2-methacryloyloxyethyl phosphorylcholine (I). Thus, impregnation of a polyethylene hollow-fiber membrane (having pore volume 71 vol%; as support) with a 0.7% MeOH-THF 1:1 solution of a I (31.0 mol%)-Bu methacrylate copolymer (II; mol. weight 38,000) for 5 min gave a biocompatible, functionalized membrane with II content 6.3% which showed adhesion of blood platelets 8.0% in a dialysis assay, vs. 39.5% for a supported Bu methacrylate homopolymer in place of the II.
 CC 38-3
 ST Miscellaneous Descriptors
 membrane antithrombotic methacrylate phosphorylcholine ester copolymer;
 biocompatible membrane methacrylate phosphorylcholine ester copolymer;
 dialyzer membrane methacryloyloxyethyl phosphorylcholine copolymer
 biocompatible; prosthetic methacryloyloxyethyl phosphorylcholine
 copolymer biocompatible; ammonium phosphate inner salt polymer
 biocompatible
 RN 125275-25-4 (n-Butyl methacrylate-2-methacryloyloxyethyl
 phosphorylcholine copolymer)
 RN 134980-16-8; 134980-17-9

 L82 ANSWER 58 OF 70 MEDLINE on STN DUPLICATE 10
 ACCESSION NUMBER: 2002098928 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 11829441
 TITLE: The vascular prosthesis without pseudointima prepared by
 antithrombogenic phospholipid polymer.
 AUTHOR: Yoneyama Toshikazu; Sugihara Ken-ichi; Ishihara Kazuhiko;
 Iwasaki Yasuhiko; Nakabayashi Nobuo
 CORPORATE SOURCE: The Second Department of Surgery, School of Medicine, Tokyo
 Medical and Dental University, Japan.
 SOURCE: Biomaterials, (2002 Mar) 23 (6) 1455-9.
 Journal code: 8100316. ISSN: 0142-9612.
 PUB. COUNTRY: England: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200207
 ENTRY DATE: Entered STN: 20020207
 Last Updated on STN: 20020730
 Entered Medline: 20020729
 ED Entered STN: 20020207
 Last Updated on STN: 20020730
 Entered Medline: 20020729
 AB On the luminal surface of the common synthetic vascular prostheses, blood

coagulation can occur and a thrombus membrane is formed when blood flow passes through it. The thrombus membrane should be organized according to the wound healing process and it becomes a pseudointima which could serve as a blood conduit. However, the small-diameter vascular prosthesis may be quickly occluded by the initial thrombus. Therefore, no clinically applicable small-diameter prostheses have been developed to date. 2-Methacryloyloxyethyl phosphoryleholine (MPC) polymers resemble the structure of an outer cell membrane similar to the fluid mosaic model and demonstrate excellent antithrombogenicity. The purpose of this study is to develop a clinically applicable small-diameter prosthesis based on the new concept of the MPC polymer. We prepared vascular prostheses (2mm ID) from polymer blend composed of segmented polyurethane and the MPC polymer. The prostheses were placed in rabbit carotid arteries. The luminal surface retrieved at eight weeks after implantation was clear without thrombus and pseudointima. We now realize that the vascular prosthesis having the MPC polymer can be applied as a small-diameter prosthesis because it functions without thrombus and pseudointima formation.

CT Animals
 Arteries: PA, pathology
 *Biocompatible Materials
 *Methacrylates: CH, chemistry
 Microscopy, Electron, Scanning
 *Phosphorylcholine: AA, analogs & derivatives
 *Phosphorylcholine: CH, chemistry
 *Polymers: CH, chemistry
 Rabbits
 Time Factors
 *Tunica Intima: CH, chemistry
 Tunica Intima: UL, ultrastructure
RN 107-73-3 (Phosphorylcholine); 67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)
CN 0 (Biocompatible Materials); 0 (Methacrylates); 0 (Polymers)

L82 ANSWER 59 OF 70 MEDLINE on STN
ACCESSION NUMBER: 2005301982 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15948416
TITLE: Effects of surface modification of intraocular lenses on foreign body reaction.
AUTHOR: Okajima Yasuhiko; Saika Shizuya; Sawa Mitsuru
CORPORATE SOURCE: Department of Ophthalmology, Nihon University School of Medicine, Japan.
SOURCE: Nippon Ganka Gakkai zasshi, (2005 May) 109 (5) 267-73.
Journal code: 7505716. ISSN: 0029-0203.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Japanese
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200507
ENTRY DATE: Entered STN: 20050614
Last Updated on STN: 20050731
Entered Medline: 20050729
ED Entered STN: 20050614
Last Updated on STN: 20050731
Entered Medline: 20050729
AB PURPOSE: In order to improve biocompatibility, we investigated the effects of surface modification by 2-methacryloyloxyethyl phosphorylcholine (MPC) on the foreign body reaction of intraocular lens (IOLs). MATERIALS AND METHODS: Materials of the IOLs were polymethylmethacrylate, hydrophobic acryl, and MPC surface-modified hydrophobic IOLs (MPC modified acryl). In an in vitro study, cultured macrophages sampled from mouse intra-abdominal

exudate were cultured on a plate for each IOL material. The cell density and morphology of attached cells on the IOL materials were investigated. In an in vivo study, each IOL material was implanted in the peritoneal space of mice and foreign body reaction was investigated with a light microscope and a scanning electron microscope. RESULTS: In the in vitro study, the cells on the MPC modified acryl IOL material were remarkably fewer than those on the plates of the other two IOL materials. Regarding the implanted IOL materials, MPC modified acryl IOL material showed more polynuclear giant foreign body cells in the early period than the other two IOL materials. CONCLUSION: MPC surface modification can reduce the foreign body reaction of IOLs and has the potential to improve biocompatibility of IOL materials.

CT Check Tags: Male

Animals

Cell Adhesion

Cells, Cultured

*Coated Materials, Biocompatible

English Abstract

*Foreign-Body Reaction

*Lenses, Intraocular

*Macrophages, Peritoneal: IM, immunology

Macrophages, Peritoneal: PA, pathology

*Methacrylates

Mice

Mice, Inbred C57BL

*Phosphorylcholine

*Phosphorylcholine: AA, analogs & derivatives

RN 107-73-3 (Phosphorylcholine); 67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)

CN 0 (Coated Materials, Biocompatible); 0 (Methacrylates)

L82 ANSWER 60 OF 70 MEDLINE on STN

ACCESSION NUMBER: 2002392253 MEDLINE

DOCUMENT NUMBER: PubMed ID: 12072015

TITLE: Beneficial effects of synthetic phospholipid polymer, poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate), on stratum corneum function.

AUTHOR: Kanekura T; Nagata Y; Miyoshi H; Ishihara K; Nakabayashi N; Kanzaki T

CORPORATE SOURCE: Department of Dermatology, Kagoshima University Faculty of Medicine, Japan.. takurok@m2.kufm.kagoshima-u.ac.jp

SOURCE: Clinical and experimental dermatology, (2002 May), 27 (3) 230-4.

JOURNAL code: 7606847. ISSN: 0307-6938.

PUB. COUNTRY: England: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200209

ENTRY DATE: Entered STN: 20020727

Last Updated on STN: 20020911

Entered Medline: 20020910

ED Entered STN: 20020727

Last Updated on STN: 20020911

Entered Medline: 20020910

AB The effects of a newly synthesized phospholipid polymer, poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate) [poly(MPC-co-BMA)], on the water barrier function and water-holding capacity of the stratum corneum were examined by measuring transepidermal water loss (TEWL) and electrical conductance of the skin surface. On the

backs of four NC mice, the epidermal permeability barrier was abrogated by cellophane tape stripping 30 times. The skin was then treated with 0.1% poly(MPC-co-BMA) or distilled water twice daily for the following 3 days. Poly(MPC-co-BMA) reduced TEWL significantly compared with the control after the first treatment ($P = 0.044$) and this effect was observed for 3 days. In human skin, water-holding capacity was measured at 5, 10, 15, 30 min and 1, 2, and 4 h after the application of poly(MPC-co-BMA) or distilled water to both volar forearms of 21 healthy volunteers. Skin treated with poly(MPC-co-BMA) showed significantly greater ability to retain water at all time points. Poly(MPC-co-BMA) is the first synthetic material that can enhance both the water barrier function and water-holding capacity of the stratum corneum. Our results indicate that this substance may be useful clinically in the treatment of dry skin.

CT Check Tags: Female; Male

Adult

Animals

Dose-Response Relationship, Drug

*Epidermis: DE, drug effects

Epidermis: ME, metabolism

Galvanic Skin Response: DE, drug effects

Humans

*Methacrylates: PD, pharmacology

Mice

Middle Aged

Patch Tests

*Phosphorylcholine: AA, analogs & derivatives

Phosphorylcholine: IM, immunology

*Phosphorylcholine: PD, pharmacology

Water: ME, metabolism

*Water Loss, Insensible: DE, drug effects

RN 107-73-3 (Phosphorylcholine); 125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate));
7732-18-5 (Water)

CN 0 (Methacrylates)

L82 ANSWER 61 OF 70 MEDLINE on STN

ACCESSION NUMBER: 2001018842 MEDLINE

DOCUMENT NUMBER: PubMed ID: 10898238

TITLE: New polymeric biomaterials-phospholipid polymers with a biocompatible surface.

AUTHOR: Ishihara K

CORPORATE SOURCE: Department of Materials Science, Graduate School of Engineering, The University of Tokyo, Japan.

SOURCE: Frontiers of medical and biological engineering : international journal of the Japan Society of Medical Electronics and Biological Engineering, (2000) 10 (2) 83-95.

Journal code: 9011464. ISSN: 0921-3775.

PUB. COUNTRY: Netherlands

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200011

ENTRY DATE: Entered STN: 20010322

Last Updated on STN: 20010322

Entered Medline: 20001109

ED Entered STN: 20010322

Last Updated on STN: 20010322

Entered Medline: 20001109

AB New biomedical polymers were designed with attention to the surface of

biological membranes, i.e. the surface was completely covered with phospholipid polar groups. The polymers with a phosphorylcholine group, 2-methacryloyloxyethyl phosphorylcholine (MPC) co-polymerized with hydrophobic alkyl group, could interact with phospholipids in plasma selectively and strongly. The adsorbed phospholipids on the polymer surface were concentrated, organized each other and then formed a self-assembled biomimetic membrane surface. The surface showed excellent resistance for both protein adsorption and blood cell adhesion, i.e. the MPC polymer showed good blood compatibility. Based on these characteristics of the MPC polymer, it was applied to improve the biocompatibility and biostability of an implantable glucose sensor. The relative output current of the sensor covered with the MPC polymer membrane was maintained as the initial level even after 14 days of subcutaneous implantation in a rat. Therefore, it is concluded that the MPC polymer membrane is an excellent material for implantable biomedical devices.

CT Adsorption
 Animals
 *Biocompatible Materials: CH, chemistry
 Biosensing Techniques
 *Blood Coagulation
 Cell Adhesion
 Glucose: AN, analysis
 Humans
 Membranes, Artificial
 Methacrylates: CS, chemical synthesis
 *Methacrylates: CH, chemistry
 Microspheres
 *Phosphorylcholine: AA, analogs & derivatives
 Phosphorylcholine: CS, chemical synthesis
 Phosphorylcholine: CH, chemistry
 Proteins: CH, chemistry
 Rats
 Research Support, Non-U.S. Gov't
 Surface Properties
 RN 107-73-3 (Phosphorylcholine); 125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate));
 50-99-7 (Glucose)
 CN 0 (Biocompatible Materials); 0 (Methacrylates); 0 (Proteins)

L82 ANSWER 62 OF 70 MEDLINE on STN
 ACCESSION NUMBER: 95130614 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 7829565
 TITLE: Selective adhesion of platelets on a polyion complex composed of phospholipid polymers containing sulfonate groups and quarternary ammonium groups.
 AUTHOR: Ishihara K; Inoue H; Kurita K; Nakabayashi N
 CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan.
 SOURCE: Journal of biomedical materials research, (1994 Nov) 28 (11) 1347-55.
 Journal code: 0112726. ISSN: 0021-9304.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199502
 ENTRY DATE: Entered STN: 19950307
 Last Updated on STN: 19950307
 Entered Medline: 19950223

ED Entered STN: 19950307
 Last Updated on STN: 19950307
 Entered Medline: 19950223

AB We investigated the effects of electrical charges on cell-polymer interactions of poly[2-methacryloyloxyethyl phosphorylcholine(MPC)-co-n-butyl methacrylate (BMA)] (PMB) having excellent blood compatibility, by copolymerizing anionic or cationic methacrylates with MPC and BMA. A polyion complex (PIC) composed of anionic and cationic MPC copolymers was also prepared. When the cell adhesion on these polymer surfaces from rabbit whole blood was evaluated, we observed a considerable reduction in cell adhesion on the MPC copolymers compared with that on poly(BMA), even when the MPC copolymer was electrically charged. On the other hand, many platelets selectively adhered to the PIC surface from whole blood, but the adherent platelets maintained a discoid shape. The amount of adenosine triphosphate (ATP) in platelets adherent on the PMB or the PIC from a platelet-rich plasma (PRP) was more than 75% of that in the original PRP, which indicated that the activity of these platelets remained high. However, in the platelets adherent to poly(BMA), only a small amount of ATP remained. Protein adsorption on the polymer surface from human plasma was investigated using a gold-colloid-labeled immunoassay against albumin gamma-globulin, and fibrinogen. Many of these proteins adsorbed on poly(BMA), whereas a small amount of protein was observed on the MPC copolymers that had an electrical charge. Albumin adsorption and suppression of gamma-globulin and fibrinogen adsorption were found on the PIC. Therefore, the introduction of electrical charges in the PMB did not have an adverse effect on cell adhesion and protein adsorption. (ABSTRACT TRUNCATED AT 250 WORDS)

CT Adenosine Triphosphate: ME, metabolism
 Adsorption
 Animals
 Blood Platelets: ME, metabolism
 Blood Platelets: PH, physiology
 *Materials Testing
 *Methacrylates
 Microscopy, Electron, Scanning
 *Phosphorylcholine: AA, analogs & derivatives
 *Platelet Adhesiveness
 *Polymers: CS, chemical synthesis
 Polymers: CH, chemistry
 *Proteins: PK, pharmacokinetics
 Rabbits
 Research Support, Non-U.S. Gov't

RN 107-73-3 (Phosphorylcholine); 56-65-5 (Adenosine Triphosphate);
 67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)

CN 0 (Methacrylates); 0 (Polymers); 0 (Proteins); 0 (butyl methacrylate)

L82 ANSWER 63 OF 70 MEDLINE on STN
 ACCESSION NUMBER: 95085403 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 7993191
 TITLE: Improvement of hemocompatibility on a cellulose dialysis membrane with a novel biomedical polymer having a phospholipid polar group.
 AUTHOR: Ishihara K; Fukumoto K; Miyazaki H; Nakabayashi N
 CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan.
 SOURCE: Artificial organs, (1994 Aug) 18 (8) 559-64.
 Journal code: 7802778. ISSN: 0160-564X.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English

FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199501
 ENTRY DATE: Entered STN: 19950124
 Last Updated on STN: 19980206
 Entered Medline: 19950106
 ED Entered STN: 19950124
 Last Updated on STN: 19980206
 Entered Medline: 19950106
 AB To improve surface hemocompatibility on cellulose hollow fibers for hemodialysis, newly designed hemocompatible polymers with a phospholipid polar group, 2-methacryloyloxyethyl phosphorylcholine (MPC) polymers, were introduced on the surface through two different methods: direct grafting of MPC on the surface, or coating of a water-soluble cellulose grafted with MPC. The MPC was polymerized using cerium ion as an initiator in the cellulose hollow fibers, and the poly(MPC) chains were grafted directly on the surface. Another modification of the cellulose hollow fibers was attempted by coating them with a water-soluble graft copolymer composed of a poly(MPC) side chain and a cellulose backbone. The coating process from an aqueous solution of the graft copolymer was very convenient, and the graft copolymer on the surface was not detached even after water circulated into the hollow fibers. These cellulose hollow fibers modified with MPC polymers displayed excellent hemocompatibility such as prevention of blood cell adhesion and aggregation after contact with blood without an anticoagulant. The permeability of the hollow fibers did not decrease as a result of these modifications. From these results, it is clearly suggested that introduction of the MPC units was effective for improving the hemocompatibility of the hollow fibers for hemodialysis.
 CT Animals
 *Biocompatible Materials
 *Blood Physiology
 *Cellulose
 Humans
 Materials Testing
 Membranes, Artificial
 *Methacrylates
 *Phosphorylcholine: AA, analogs & derivatives
 Platelet Adhesiveness
 Platelet Aggregation
 Polymers
 Rabbits
 *Renal Dialysis: IS, instrumentation
 Renal Dialysis: MT, methods
 Research Support, Non-U.S. Gov't
 Solubility
 Surface Properties
 RN 107-73-3 (Phosphorylcholine); 67881-98-5 (2-methacryloyloxyethyl phosphorylcholine); 9004-34-6 (Cellulose)
 CN 0 (Biocompatible Materials); 0 (Methacrylates); 0 (Polymers)

L82 ANSWER 64 OF 70 MEDLINE on STN
 ACCESSION NUMBER: 95197310 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 7890439
 TITLE: Polymeric biomaterials: influence of phosphorylcholine polar groups on protein adsorption and complement activation.
 AUTHOR: Yu J; Lamba N M; Courtney J M; Whateley T L; Gaylor J D;
 Lowe G D; Ishihara K; Nakabayashi N
 CORPORATE SOURCE: Bioengineering Unit, University of Strathclyde, Glasgow,
 UK.
 SOURCE: International journal of artificial organs, (1994 Sep) 17

(9) 499-504.
 Journal code: 7802649. ISSN: 0391-3988.

PUB. COUNTRY: Italy
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199504
 ENTRY DATE: Entered STN: 19950427
 Last Updated on STN: 19950427
 Entered Medline: 19950418

ED Entered STN: 19950427
 Last Updated on STN: 19950427
 Entered Medline: 19950418

AB The introduction to polymeric biomaterials of phosphorylcholine polar groups represents an approach towards the development of materials with improved blood compatibility. In this respect, two biomaterials, one a copolymer of butyl methacrylate and 2-methacryloyloxyethylphosphorylcholine (MPC), (poly(BMA-co-MPC) and the other, MPC-grafted Cuprophan, were examined with respect to their influence on protein adsorption and complement activation. Protein adsorption was studied by measurement of the adsorption of radiolabelled single proteins (albumin and fibrinogen), while complement activation was measured using **radioimmunoassay** for C3a des Arg. The investigation demonstrated that the polymers containing phosphorylcholine polar groups can achieve a marked reduction in protein adsorption and complement activation and supports the utilization of phosphorylcholine polar groups as a means of improving the compatibility of biomaterials for blood-contacting applications.

CT Adsorption: DE, drug effects
 Albumins: DE, drug effects
 *Albumins: ME, metabolism
 *Biocompatible Materials: CH, chemistry
 Biocompatible Materials: PD, pharmacology
 Cellulose: AA, analogs & derivatives
 Cellulose: CH, chemistry
 Complement 3a: ME, metabolism
 *Complement Activation: DE, drug effects
 Fibrinogen: DE, drug effects
 *Fibrinogen: ME, metabolism
 Humans
 Membranes, Artificial
 Methacrylates: CH, chemistry
 Phosphorylcholine: AA, analogs & derivatives
 Phosphorylcholine: CH, chemistry
 *Phosphorylcholine: PD, pharmacology
 Polymers

RN 107-73-3 (Phosphorylcholine); 67881-98-5 (2-methacryloyloxyethyl phosphorylcholine); 80295-42-7 (Complement 3a); 9001-32-5 (Fibrinogen); 9004-34-6 (Cellulose); 9050-09-3 (cuprammonium cellulose)

CN 0 (Albumins); 0 (Biocompatible Materials); 0 (Methacrylates); 0 (Polymers); 0 (butyl methacrylate)

L82 ANSWER 65 OF 70 MEDLINE on STN
 ACCESSION NUMBER: 94266935 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 8207035
 TITLE: Hemocompatibility on graft copolymers composed of poly(2-methacryloyloxyethyl phosphorylcholine) side chain and poly(n-butyl methacrylate) backbone.
 AUTHOR: Ishihara K; Tsuji T; Kurosaki T; Nakabayashi N
 CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan.

SOURCE: Journal of biomedical materials research, (1994 Feb) 28 (2)
 225-32.
 Journal code: 0112726. ISSN: 0021-9304.

PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199407
 ENTRY DATE: Entered STN: 19940721
 Last Updated on STN: 19940721
 Entered Medline: 19940712

ED Entered STN: 19940721
 Last Updated on STN: 19940721
 Entered Medline: 19940712

AB To improve the hemocompatibility on hydrophobic biomedical materials by a simple coating technique, graft copolymers composed of a hydrophilic side chain with phospholipid polar groups and a hydrophobic backbone were synthesized. The hydrophilic chain had phospholipid polar groups, poly[2-methacryloyloxyethyl phosphorylcholine (MPC)], and the hydrophobic backbone was poly[n-butyl methacrylate (BMA)]. Because the graft copolymers obtained could dissolve in ethanol, they could be used as a coating material. When the poly(MPC-graft-BMA) was coated onto a poly(BMA) membrane, the composition of the MPC units on the surface was maintained in the bulk graft copolymer even after immersion in water. Protein adsorption on the membrane coated with the graft copolymer from human plasma detected by a gold-colloid labeled immunoassay was drastically decreased compared with that on glass and the original membrane. Moreover, blood cell adhesion, activation, and aggregation on the membrane after contact with human citrated whole blood were suppressed by the coating of the graft copolymer. These results clearly show that the poly(MPC-graft-BMA) is a suitable material for improving hemocompatibility on the biomedical devices because of its protein adsorption and cell adhesion resistant properties.

CT Adsorption
 Blood Proteins: PK, pharmacokinetics
 Cell Adhesion
 Erythrocytes: PH, physiology
 Humans
 *Materials Testing
 Methacrylates: CS, chemical synthesis
 *Methacrylates: ST, standards
 Microscopy, Electron, Scanning
 *Phosphorylcholine: AA, analogs & derivatives
 Phosphorylcholine: CS, chemical synthesis
 Phosphorylcholine: ST, standards
 Research Support, Non-U.S. Gov't

RN 107-73-3 (Phosphorylcholine); 125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate))

CN 0 (Blood Proteins); 0 (Methacrylates)

L82 ANSWER 66 OF 70 MEDLINE on STN
 ACCESSION NUMBER: 94064695 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 8245045
 TITLE: Effects of phospholipid adsorption on nonthrombogenicity of polymer with phospholipid polar group.
 AUTHOR: Ishihara K; Oshida H; Endo Y; Watanabe A; Ueda T;
 Nakabayashi N
 CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan.
 SOURCE: Journal of biomedical materials research, (1993 Oct) 27

(10) 1309-14.
 Journal code: 0112726. ISSN: 0021-9304.

PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199312
 ENTRY DATE: Entered STN: 19940201
 Last Updated on STN: 19950206
 Entered Medline: 19931223

ED Entered STN: 19940201
 Last Updated on STN: 19950206
 Entered Medline: 19931223

AB Polymers with phospholipid polar groups, 2-methacryloyloxyethyl phosphorylcholine (MPC) polymers, have excellent nonthrombogenic properties. The effects of adsorption of phospholipids on platelet adhesion and activation on the MPC copolymer with n-butyl methacrylate (BMA) were investigated with particular attention to the structure of the phospholipids adsorbed onto the polymer surface. The electrical nature of the phospholipids adsorbed on the polymer surface affected the thrombogenicity of the polymer. On the MPC polymer surface treated with an aqueous liposomal solution of acidic phospholipids, phosphatidylserine, platelet adhesion and activation occurred to a greater extent when compared to a poly(MPC-co-BMA) surface. However, on the MPC polymer surface treated with electrically neutral phosphatidylcholines, reduced thrombogenicity could be observed. Therefore, the adsorption of the phosphatidylcholines was an important factor in reducing the thrombogenicity on the polymers. Moreover, by comparison of the poly(MPC-co-BMA) to a poly(BMA), platelet adhesion and activation on these polymer surfaces depended on the adsorption state of the phosphatidylcholines. The amount of phosphatidylcholine adsorbed on the poly(MPC-co-BMA) increased with an increase in the MPC mole fraction of the copolymer. This indicates that the MPC moieties have affinity for the phosphatidylcholines. We conclude that the poly(MPC-co-BMA) can adsorb large amounts of phosphatidylcholines and that these phospholipids organize themselves. The organized adsorption layer of the phosphatidylcholines on the surface, which construct biomembrane-like surfaces, can reduce platelet adhesion and activation effectively.

CT 1,2-Dipalmitoylphosphatidylcholine
 Adsorption
 Animals
 *Biocompatible Materials
 Blood Coagulation
 Liposomes
 *Methacrylates
 Microscopy, Electron, Scanning
 *Phospholipids
 *Phosphorylcholine: AA, analogs & derivatives
 *Platelet Activation
 *Platelet Adhesiveness
 Rabbits

RN 107-73-3 (Phosphorylcholine); 125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate));
 2644-64-6 (1,2-Dipalmitoylphosphatidylcholine)
 CN 0 (Biocompatible Materials); 0 (Liposomes); 0 (Methacrylates); 0 (Phospholipids)

L82 ANSWER 67 OF 70 MEDLINE on STN
 ACCESSION NUMBER: 93131994 MEDLINE

DOCUMENT NUMBER: PubMed ID: 1484061
 TITLE: Hemocompatibility of human whole blood on polymers with a phospholipid polar group and its mechanism.
 AUTHOR: Ishihara K; Oshida H; Endo Y; Ueda T; Watanabe A;
 Nakabayashi N
 CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan.
 SOURCE: Journal of biomedical materials research, (1992 Dec) 26 (12) 1543-52.
 Journal code: 0112726. ISSN: 0021-9304.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199302
 ENTRY DATE: Entered STN: 19930226
 Last Updated on STN: 19980206
 Entered Medline: 19930218

ED Entered STN: 19930226
 Last Updated on STN: 19980206
 Entered Medline: 19930218

AB The hemocompatibility of a polymer containing a phospholipid polar group, poly(2-methacryloyloxyethyl phosphorylcholine (MPC)-co-n-butyl methacrylate(BMA)), with human whole blood was evaluated. When human whole blood without an anticoagulant was contacted with polymers, the blood cell adhesion and aggregation on the polymer without the MPC moiety was extensive, and considerable fibrin deposition was observed. This phenomenon was suppressed with an increase in the polymer MPC composition. Thus, the MPC moiety in the copolymer plays an important role in the nonthrombogenic behavior of the copolymer. These results were also confirmed by the whole blood coagulation time on the polymer surface which was determined by Lee-White method. The adsorption of phospholipids and proteins from human plasma on poly(MPC-co-BMA) was investigated to clarify the mechanism of the nonthrombogenicity observed with the polymer. The amount of phospholipids was increased; whereas, adsorbed proteins were decreased with an increase in the MPC composition. From these results, we concluded that the phospholipids adsorbed on poly(MPC-co-BMA) play the most important role in the nonthrombogenicity of the MPC copolymer.

CT Check Tags: In Vitro
 Adsorption
 *Biocompatible Materials: CH, chemistry
 Blood Coagulation
 *Blood Physiology
 Humans
 *Methacrylates: CH, chemistry
 Methacrylates: ME, metabolism
 Microscopy, Electron, Scanning
 Microspheres
 *Phospholipids: CH, chemistry
 *Phosphorylcholine: AA, analogs & derivatives
 Phosphorylcholine: CH, chemistry
 Phosphorylcholine: ME, metabolism
 Polyhydroxyethyl Methacrylate: AN, analysis
 *Polymers: CH, chemistry
 Research Support, Non-U.S. Gov't
 Thrombosis: BL, blood
 RN 107-73-3 (Phosphorylcholine); 125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate)); 25249-16-5 (Polyhydroxyethyl Methacrylate)

CN 0 (Biocompatible Materials); 0 (Methacrylates); 0 (Phospholipids); 0 (Polymers)

L82 ANSWER 68 OF 70 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2005:317261 BIOSIS
 DOCUMENT NUMBER: PREV200510103200
 TITLE: Novel biocompatible phosphorylcholine-based self-assembled nanoparticles for drug delivery.
 AUTHOR(S): Salvage, Jonathan P.; Rose, Susanna F.; Phillips, Gary J.; Hanlon, Geoffrey W.; Lloyd, Andrew W. [Reprint Author]; Ma, Iris Y.; Armes, Stephen P.; Billingham, Norman C.; Lewis, Andrew L.
 CORPORATE SOURCE: Univ Brighton, Sch Pharm and Biomol Sci, Biomed Mat Res Grp, Moulsecobm, Brighton BN2 4GJ, E Sussex, UK
 a.w.lloyd@brighton.ac.uk
 SOURCE: Journal of Controlled Release, (MAY 18 2005) Vol. 104, No. 2, pp. 259-270.
 CODEN: JCREEC. ISSN: 0168-3659.

DOCUMENT TYPE: Article
 LANGUAGE: English
 ENTRY DATE: Entered STN: 17 Aug 2005
 Last Updated on STN: 17 Aug 2005

ED Entered STN: 17 Aug 2005
 Last Updated on STN: 17 Aug 2005

AB Major challenges associated with nano-sized drug delivery systems include removal from systemic circulation by phagocytic cells and controlling appropriate drug release at target sites. 2-methacryloyloxyethyl phosphorylcholine (MPC) has been copolymerised in turn with two pH responsive comonomers (2-(diethylamino)ethyl methacrylate (DEA) and 2-(diisopropylamino)ethyl methacrylate (DPA), to develop novel biocompatible drug delivery vehicles. Micelles were prepared from a series of copolymers with varying block compositions and their colloidal stability and dimensions were assessed over a range of solution pH using photon correlation spectroscopy. The drug loading capacities of these micelles were evaluated using Orange OT dye as a model compound. The cytotoxicity of the micelles was assessed using an *in vitro assay*. The MPC-DEA diblock copolymers formed micelles at around pH 8 and longer DEA block lengths allowed higher drug loadings. However, these micelles were not stable at physiological pH. In contrast, MPC-DPA diblock copolymers formed micelles of circa 30 nm diameter at physiological pH. *In vitro assays* indicated that these MPC-DPA diblock copolymers had negligible cytotoxicities. Thus novel non-toxic biocompatible micelles of appropriate size and good colloidal stability with pH-modulated drug uptake and release can be readily produced using MPC-DPA diblock copolymers. (c) 2005 Elsevier B.V All rights reserved.

CC Biophysics - Bioengineering 10511
 IT Major Concepts
 Methods and Techniques; Biomaterials
 IT Chemicals & Biochemicals
 2-methacryloyloxyethyl phosphorylcholine; 2-(diethylamino)ethyl methacrylate; 2-(diisopropylamino)ethyl methacrylate
 IT Methods & Equipment
 photon correlation spectroscopy: laboratory techniques, spectrum analysis techniques; phosphorylcholine-based self-assembled nanoparticle: drug delivery device
 IT Miscellaneous Descriptors
 drug delivery; pH-responsive
 RN 67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)
 105-16-8 (2-(diethylamino)ethyl methacrylate)

L82 ANSWER 69 OF 70 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2005:70886 BIOSIS
 DOCUMENT NUMBER: PREV200500069303
 TITLE: A novel methodology for pre-screening anti-thrombogenicity of artificial organs under physiologically identical pulsatile environments.
 AUTHOR(S): Iwasaki, K.; Takeuchi, Y.; Saeki, W.; Umezawa, M.; Ishihara, K.; Imachi, K.
 SOURCE: International Journal of Artificial Organs, (July 2004), Vol. 27, No. 7, pp. 567. print.
 Meeting Info.: 31st Annual Congress of the European Society for Artificial Organs (ESAO). Warsaw, Poland. September 08-11, 2004. European Society for Artificial Organs.
 CODEN: IJAODS. ISSN: 0391-3988.

DOCUMENT TYPE: Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 16 Feb 2005
 Last Updated on STN: 16 Feb 2005

ED Entered STN: 16 Feb 2005
 Last Updated on STN: 16 Feb 2005.

CC General biology - Symposia, transactions and proceedings 00520
 Biochemistry studies - Proteins, peptides and amino acids 10064
 Biophysics - Bioengineering 10511
 Cardiovascular system - Physiology and biochemistry 14504
 Blood - Blood and lymph studies 15002
 Blood - Blood cell studies 15004
 Immunology - General and methods 34502

IT Major Concepts
 Biomaterials; Cardiovascular System (Transport and Circulation)

IT Parts, Structures, & Systems of Organisms
 aorta: circulatory system; atrium: circulatory system; platelet: blood and lymphatics

IT Chemicals & Biochemicals
 2-methacryloyloxyethyl phosphorylcholine; IgG [immunoglobulin G]; albumin; fibrinogen; polyurethane

IT Methods & Equipment
 gold colloid labeling immunoassay: laboratory techniques;
 ventricular assist device: prosthetic

RN 67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)

L82 ANSWER 70 OF 70 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2000:113997 BIOSIS
 DOCUMENT NUMBER: PREV200000113997
 TITLE: Chemical modification of silk fibroin with 2-methacryloyloxyethyl phosphorylcholine. II. Graft-polymerization onto fabric through 2-methacryloyloxyethyl isocyanate and interaction between fabric and platelets.

AUTHOR(S): Furuzono, T.; Ishihara, K.; Nakabayashi, N.; Tamada, Y.
 [Reprint author]

CORPORATE SOURCE: National Institute of Sericultural and Entomological Science, 2-1 Owashi, Tsukuba, Ibaraki, 305-8634, Japan

SOURCE: Biomaterials, (Feb., 2000) Vol. 21, No. 4, pp. 327-333. print.
 CODEN: BIMADU. ISSN: 0142-9612.

DOCUMENT TYPE: Article

LANGUAGE: English
ENTRY DATE: Entered STN: 29 Mar 2000
Last Updated on STN: 3 Jan 2002

ED Entered STN: 29 Mar 2000
Last Updated on STN: 3 Jan 2002

AB 2-Methacryloyloxyethyl phosphorylcholine (MPC) was grafted onto silk fabric in a two-step heterogeneous system through the vinyl bonds of 2-methacryloyloxyethyl isocyanate (MOI) modified on the fabric. First, habutae silk fabric was modified with the MOI monomer in anhydrous dimethyl sulfoxide using di-n-butyltin (IV) dilaurate and hydroquinone at 35degreeC. The saturated weight gain of modified MOI monomer on the fabric was 7.3 wt% versus the original silk. Second, graft polymerization with MPC onto the MOI modified silk was conducted using 2,2'-azo bis(2-(2-imidazolin-2-yl)propane dihydrochloride) (VA-044) as an azo polymerization initiator. The weight of the grafted MPC eventually gained was about 26.0 wt%. The MOI-modified and MPC-grafted silk fabrics were analyzed by Fourier transform infrared (FT-IR) spectroscopy. To confirm the improved biocompatibility of the silk fabric, platelet adhesion was preliminarily tested measuring lactate dehydrogenase. The number of platelets adhering to polyMPC-grafted silk fabric decreased by about one tenth compared to original and MOI-modified silk after 60 min of contact with human platelet-rich plasma (1.0 X 10⁶ platelets cm⁻²).

CC Blood - General and methods 15001
Biochemistry methods - General 10050
Biochemistry studies - General 10060
Biophysics - General 10502
Pathology - Therapy 12512

IT Major Concepts
Biomaterials; Chemistry; Blood and Lymphatics (Transport and Circulation)

IT Chemicals & Biochemicals
2-methacryloyloxyethyl isocyanate; 2-methacryloyloxyethyl phosphorylcholine; silk fibroin

IT Methods & Equipment
platelet adhesion assay: analytical method

IT Miscellaneous Descriptors
chemical modification; fabric-platelet interaction;
graft-polymerization; silk fabric

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

RN 30674-80-7 (2-methacryloyloxyethyl isocyanate)
67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)

=> d his 181

(FILE 'HCAPLUS, TOXCENTER, WPIX, MEDLINE, BIOSIS, CANCERLIT, EMBASE, PASCAL, JICST-EPLUS, DRUGU, BIOTECHNO, BIOTECHDS, SCISEARCH, CONF, CONFSCI, DISSABS' ENTERED AT 15:25:01 ON 20 SEP 2005)

L81 6 DUP REM L80 (6 DUPLICATES REMOVED)

=> d que 181

L63 QUE ABB=ON PLU=ON ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
LISA OR RIA OR ?COAG?
L76 1325 SEA SUMIDA, K?/AU
L77 17872 SEA WADA, K?/AU
L78 14175 SEA ISHIHARA, K?/AU
L79 3656 SEA (L76 OR L77 OR L78) AND L63
L80 12 SEA L79 AND WAKO/CS,SO,PA
L81 6 DUP REM L80 (6 DUPLICATES REMOVED)

=> d ibib ed ab 181 1-6

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, BIOSIS, PASCAL' - CONTINUE? (Y)/N:y

L81 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2005:284034 HCAPLUS
DOCUMENT NUMBER: 142:332458
TITLE: Latex agglutination immunoassay
reagent for the determination of prostate specific antigen
INVENTOR(S): Sumida, Kyoichi; Fujita, Minoru; Adachi, Hiromichi
PATENT ASSIGNEE(S): Wako Pure Chemical Industries, Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005069967	A1	20050331	US 2004-867912	20040615
JP 2005106609	A2	20050421	JP 2003-340028	20030930
PRIORITY APPLN. INFO.:			JP 2003-340028	A 20030930

ED Entered STN: 03 Apr 2005

AB The present invention relates to (1) a reagent for an immunoassay of a target substance existing in a free form and a bound form in a specimen, comprising a latex 1 which is immobilized with a monoclonal antibody 1 for the target substance, and a latex 2 which has a different mean particle size from the latex 1 and is immobilized with a monoclonal antibody 2 having a different recognition site for the target substance from the antibody 1; (2) an immunoassay method comprising reacting the target substance with the reagent of (1) and determining an amount of the substance based on the result of an agglutination reaction among the target substance, the latex 1 and the latex 2; (3) a reagent kit comprising a reagent of (1) and a reagent containing an agglutination accelerator for an antigen-antibody reaction.

L81 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2002:958988 HCAPLUS
 DOCUMENT NUMBER: 138:21783
 TITLE: Agglutination-promoting agent for antigen or antibody immunoassay
 INVENTOR(S): Kakuta, Kyoichi; Wada, Hiroshi; Ishihara, Kazuhiko
 PATENT ASSIGNEE(S): Wako Pure Chemical Industries, Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002365296	A2	20021218	JP 2001-169051	20010605
US 2004157276	A1	20040812	US 2004-626502	20040304
			JP 2001-169051	A 20010605

PRIORITY APPLN. INFO.:

ED Entered STN: 18 Dec 2002

AB Provided are aggregation-promoting compds. for use in **agglutination immunoassay**. These compds are branched polymers or copolymers having basic (monomer) structure of OPO₂-O-R₄-N(R₁R₂R₃) where R₁₋₃ are independently H, OH or alkyl group; and R₄ is an alkyl group or alkylene group. The **agglutination immunoassay** reagent comprises carrier- or latex-immobilized antibody or antigen. The **agglutination immunoassay** is useful for determination of antigen or antibody, e.g. C-reactive protein, rheumatic factor and prostate-specific antigen.

L81 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:173633 HCAPLUS
 DOCUMENT NUMBER: 138:217873
 TITLE: Method of stabilizing substance altering in aqueous medium with heavy water
 INVENTOR(S): Wada, Koji; Hanada, Toshiro
 PATENT ASSIGNEE(S): Wako Pure Chemical Industries, Ltd., Japan
 SOURCE: PCT Int. Appl., 149 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003018614	A1	20030306	WO 2002-JP8458	20020822
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: JP 2001-253729 A 20010824

ED Entered STN: 07 Mar 2003

AB Disclosed are a stabilizer for a substance altering in aqueous media which comprises heavy water; a method of stabilizing a substance altering in aqueous media, characterized by causing the substance to coexist with heavy water; and a reagent for determining or detecting a substance contained in a sample comprising a substance altering in aqueous media and heavy water. The stabilizer stabilizes a substance altering in various aqueous media. Also provided is a composition containing the substance thus stabilized. The reagent is for determining or detecting a substance contained in the sample stabilized. A reagent for measuring GPT containing L-alanine 200, NADH 0.3, tris buffer (pH = 9) 25 mM, LDH 2400 IU, and sodium adipate 0.1 % in D₂O was prepared

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 4 OF 6 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
DUPLICATE 4

ACCESSION NUMBER: 2002:405026 BIOSIS
DOCUMENT NUMBER: PREV200200405026
TITLE: Decreased marble burying behavior in female mice lacking neuromedin-B receptor (NMB-R) implies the involvement of NMB/NMB-R in 5-HT neuron function.
AUTHOR(S): Yamada, Kazuyuki [Reprint author]; Wada, Etsuko; Yamano, Mariko; Sun, Ying-Jie; Ohara-Imaizumi, Mica; Nagamatsu, Shinya; Wada, Keiji
CORPORATE SOURCE: Division of Animal Experiment, Advanced Technology Development Center, Brain Science Institute, Riken, 2-1 Hirosawa, Wako-City, Saitama, 351-0198, Japan
yamada@ncnp.go.jp
SOURCE: Brain Research, (28 June, 2002) Vol. 942, No. 1-2, pp. 71-78. print.
CODEN: BRREAP. ISSN: 0006-8993.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 24 Jul 2002
Last Updated on STN: 24 Jul 2002

ED Entered STN: 24 Jul 2002
Last Updated on STN: 24 Jul 2002

AB Neuromedin B (NMB) is a mammalian bombesin-like peptide distributed widely in the central nervous system. This peptide exerts its function via the NMB receptor (NMB-R). Female NMB-R-deficient mice were used to study the role that NMB/NMB-R may play in 5-HT neuron function since this relationship was suggested in previous in vitro studies. As 5-HT neurons are thought to modulate marble burying behavior, a role for NMB-R in this behavior was assessed. Relative to wild-type mice, NMB-R-deficient mice showed decreased marble burying behavior. However, depletion of 5-HT by treatment with p-chlorophenylalanine (p-CPA) increased burying behavior in NMB-R-deficient mice suggesting that increased levels of 5-HT in the brain cause a decrease in burying behavior in NMB-R-deficient mice. While HPLC analysis showed that 5-HT content in the whole brain does not differ between NMB-R-deficient and wild-type mice, an immunohistochemical analysis of brain sections showed that 5-HT expression in the dorsal raphe (DR) nucleus is elevated in NMB-R-deficient mice. Furthermore, a quantitative RT-PCR analysis revealed that 5-HT1A-receptor gene expression is downregulated in NMB-R-deficient mice at the whole brain level. These behavioral and biological results suggest that NMB/NMB-R may modulate 5-HT neuronal activity by affecting DR function.

L81 ANSWER 5 OF 6 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:203901 BIOSIS
DOCUMENT NUMBER: PREV200400204444

TITLE: Analysis of lipid raft domains enriched in BACE1, possible interaction domains between amyloid precursor protein and BACE1.

AUTHOR(S): Sakurai, T. [Reprint Author]; Okuno, M.; Kaneko, K.; Wada, K.; Nukina, N.

CORPORATE SOURCE: Lab. for Structural Neuropathology, Brain Sci. Inst., RIKEN, Wako, Japan

SOURCE: Society for Neuroscience Abstract Viewer and Itinerary Planner, (2003) Vol. 2003, pp. Abstract No. 730.10. <http://sfn.scholarone.com> e-file.
Meeting Info.: 33rd Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 08-12, 2003. Society of Neuroscience.

DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 14 Apr 2004
Last Updated on STN: 14 Apr 2004

ED Entered STN: 14 Apr 2004
Last Updated on STN: 14 Apr 2004
AB Lipid rafts are membrane microdomains enriched in cholesterol and sphingolipids, and act as platforms for conducting a variety of cellular functions. In vitro and in vivo studies pointed out high cellular cholesterol levels as a promoting factor for the processing of amyloid precursor protein (APP) to amyloid-beta peptide. Since APP and amyloidogenic APP-cleaving enzymes, BACE1 and gamma-secretase, show cholesterol-dependent association with lipid rafts, the domain will be a critical site for amyloidogenic processing. We hypothesized that raft-dependent interaction between APP and BACE1 is regulated not only by lipid environment but also by proteins in the same domains. To search for candidate raft proteins, we isolated lipid raft fractions from mouse brains or primary cultured neurons by a modified method, and performed **immuno**-isolation with anti-APP or anti-BACE1 antibody. By mass-spectrometric and **immunological** analyses, only a limited number of proteins were detected both in APP-containing rafts and in BACE1-containing ones, suggesting that APP and BACE1 are located in different raft domains and interact transiently. Systematic identification and characterization of enriched proteins in each fraction will provide new insights into the regulatory mechanisms of interaction between APP and BACE1 in lipid rafts.

L81 ANSWER 6 OF 6 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on
STN DUPLICATE 3

ACCESSION NUMBER: 2002-0458932 PASCAL

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TITLE (IN ENGLISH): Variability in cholesteryl ester transfer protein in healthy Japanese hyper-HDL-cholesterolemic subjects

AUTHOR: YOSHIDA Akihiro; KODAMA Michiteru; NOMURA Hideki; KOBAYASHI Norifumi; SUMIDA Kyoichi; NAITO Michitaka

CORPORATE SOURCE: Department of Clinical Laboratory, Nakatsugawa Municipal Hospital, Nakatsugawa, Japan; Department of Geriatrics, Nagoya University Graduate School of Medicine, Nagoya, Japan; Osaka Research Laboratories, Wako Pure Chemical Industries, Osaka, Japan; Division of Nutrition and Health, Graduate School of Life Studies, Sugiyama Jogakuen University, Nagoya, Japan

SOURCE: Internal medicine : (Tokyo. 1992), (2002), 41(5),

357-359, 13 refs.

ISSN: 0918-2918

DOCUMENT TYPE:

Journal

BIBLIOGRAPHIC LEVEL:

Analytic

COUNTRY:

Japan

LANGUAGE:

English

AVAILABILITY:

INIST-11214, 354000108274270100

UP 20021001

AB Objective Hyper-high density lipoprotein (HDL)-cholesterolemia has been considered to be anti-atherogenic and is referred to as longevity syndrome. However, hyper-HDL-cholesterolemia induced by a cholestryl ester transfer protein (CETP) deficiency may not be athero-protective, rather being atherogenic in nature. In a rural area in central Japan, the incidence of hyper-HDL-cholesterolemia has been found to be rather high (3.1% of healthy people). We studied healthy Japanese people in this area with hyper-HDL-cholesterolemia, particularly in relation to CETP. Methods Serum lipids were analyzed, and CETP mass was determined with an enzyme immunoassay method. Materials Blood was drawn after an overnight fast from 17 Japanese (5 males and 12 females) with serum HDL-cholesterol (C) ≥ 100 mg/dl. Results Serum CETP mass in hyper-HDL-cholesterolemic subjects was distributed in a wide range. Serum CETP mass was positively correlated with low-density lipoprotein (LDL)-C, apolipoprotein (Apo) B, and LDL-C/HDL-C, with statistical significance. CETP was also positively correlated with LDL-C/Apo B. Conclusion These results suggest that hyper-HDL-cholesterolemia may not be a single clinical entity, but a mixture of various pathophysiological conditions, and that the ratio of LDL-C to HDL-C and the size of LDL may be important factors in classifying these conditions.

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FILE 'STNGUIDE' ENTERED AT 15:39:41 ON 20 SEP 2005

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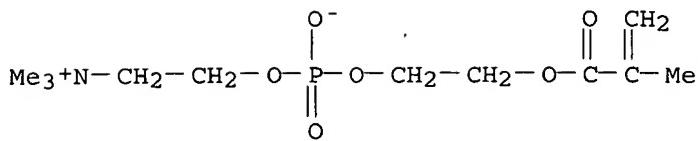
AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Sep 16, 2005 (20050916/UP).

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RETABLE

Referenced Author (RAU)	Year (R PY)	VOL (R VL)	PG (R PG)	Referenced Work (RWK)	Referenced File
Nippon Shokubai Kagaku	1992			JP 419561 A	
Nof Corporation	1998			JP 10114800 A	HCAPLUS
Shionogi & Co Ltd				EP 141627 A	HCAPLUS
Shionogi & Co Ltd	1985			JP 6091983 A	

L82 ANSWER 19 OF 70 HCAPLUS, COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000215700 HCAPLUS

DOCUMENT NUMBER: 132:262394

TITLE: Polymer/enzyme-conjugate and polymer/enzyme/antibody-conjugate for enzyme immunoassay

INVENTOR(S): Sakaki, Shujiro; Yamada, Satoru; Shudo, Kenshiro; Nakabayashi, Nobuo; Ishihara, Kazuhiko

PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000093169	A2	20000404	JP 1998-274782	19980929
PRIORITY APPLN. INFO.:			JP 1998-274782	19980929

ED Entered STN: 04 Apr 2000

AB Polymer/enzyme-conjugate and polymer/enzyme/substance with biol. specific binding ability-conjugate are provided for the use in a highly sensitive enzyme immunoassay. This polymer/enzyme-conjugate is prepared by chemical binding an enzyme for immunol. measurement (e.g., peroxidase) with a polymer synthesized by polymerizing the monomer constituent containing a hydrophilic monomer possessing a phosphorylcholin-analog group (e.g., 2-methacryloyloxyethylphosphorylcholine (MPC) (I)) and a monomer possessing a chemical reative group (e.g., methacrylate, 2-aminoethyl(meth)acrylate). The substance with biol. specific binding ability used for the conjugate is either antibody, biotin, avidin, or antigen. Various samples of polymer/horse radish peroxidase/biotin or IgG-conjugate prepared by this method exhibited an excellent solubility and 1.8-36 times higher sensitivity than the cases where no polymer was used to make conjugates.

IC ICM C12N011-08

ICS G01N033-532; C08F008-00; C08F220-06; C08F220-34; C08F230-02

CC 9-10 (Biochemical Methods)

Section cross-reference(s): 7

IT Immunoassay
(enzyme; polymer/enzyme-conjugate and polymer/enzyme/antibody-conjugate for enzyme immunoassay)

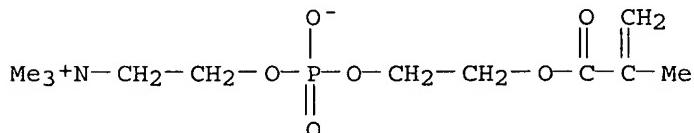
IT 7659-36-1, 2-Aminoethylmethacrylate 7659-38-3, 2-Aminoethylacrylate
18358-13-9, Methacrylate, reactions 67881-98-5,
2-Methacryloyloxyethylphosphorylcholine

RL: RCT (Reactant); RACT (Reactant or reagent)
 (polymer/enzyme-conjugate and polymer/enzyme/antibody-conjugate for
 enzyme immunoassay)

IT 67881-98-5, 2-Methacryloyloxyethylphosphorylcholine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (polymer/enzyme-conjugate and polymer/enzyme/antibody-conjugate for
 enzyme immunoassay)

RN 67881-98-5 HCAPLUS

CN 3,5,8-Trioxa-4-phosphoanodec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L82 ANSWER 20 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2000:599226 HCAPLUS
 DOCUMENT NUMBER: 133:293102
 TITLE: Water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in immunoassay system
 AUTHOR(S): Sakaki, Shujirou; Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko
 CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo, 101-0062, Japan
 SOURCE: Polymer Journal (Tokyo) (2000), 32(8), 637-641
 CODEN: POLJB8; ISSN: 0032-3896
 PUBLISHER: Society of Polymer Science, Japan
 DOCUMENT TYPE: Journal
 LANGUAGE: English

ED Entered STN: 29 Aug 2000

AB The purpose of this study is the development of a novel synthetic blocking reagent for the ELISA method. The water-soluble amphiphilic phospholipid polymer, poly[2-methacryloyloxyethyl phosphorylcholine (MPC)-co-styrene (St)], was synthesized, and the function of the poly(MPC-co-St) as a blocking reagent was compared with conventional blocking reagents which are made of proteins such as bovine serum albumin (BSA) and casein. The poly(MPC-co-St) solution functioned at the same level as BSA solution and casein

solution for preventing non-specific antibody adsorption ($p > 0.01$). When the 1.0% BSA solution and 1.0% casein solution were used as a blocking reagent, the remaining activity of the immobilized antibody decreased about 50% after 20 days. On the other hand, in 0.01% and 0.1% poly(MPC-co-St) solns., the activity remained 76% and 91% of the initial value, resp. The effects of poly(MPC-co-St) on the stabilization of the immobilized antibody depended on its concentration. These results indicated that the poly(MPC-co-St) had the ability to inhibit denaturation of protein, i.e., proteins in the ELISA system kept their native structure. We concluded that the water-soluble amphiphilic poly-(MPC-co-St) is an effective synthetic blocking reagent in the ELISA method.

CC 9-10 (Biochemical Methods)

IT Immunoassay

(enzyme-linked immunosorbent assay; water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in immunoassay system)

F 134483-35-5P
 RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
 (water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in immunoassay system)

IT 100-42-5, reactions 67881-98-5, 2-Methacryloyloxyethyl phosphorylcholine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in immunoassay system)

IT 134483-35-5P
 RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
 (water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in immunoassay system)

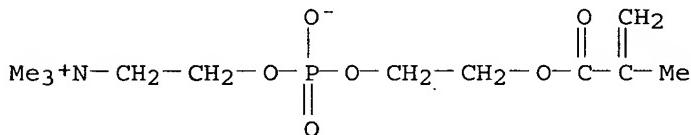
RN 134483-35-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

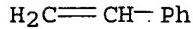
CMF C11 H22 N O6 P



CM 2

CRN 100-42-5

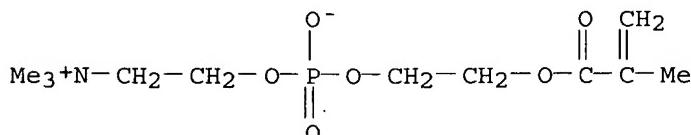
CMF C8 H8



IT 67881-98-5, 2-Methacryloyloxyethyl phosphorylcholine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in immunoassay system)

RN 67881-98-5 HCPLUS

CN 3,5,8-Trioxa-4-phosphoundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (R PY)	VOL (R VL)	PG (R PG)	Referenced Work (RWK)	Referenced File
Anderton, B	1980	2	122	Immunol Today	
Donovan, J	1975	250	1966	J Biol Chem	HCAPLUS
Farr, A	1981	47	129	J Immunol Method	HCAPLUS
Imagawa, M	1982	4	41	J Appl Biochem	HCAPLUS
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Ishihara, K	1994	32	859	J Polym Sci Part A	HCAPLUS
Ishihara, K	1990	22	355	Polym J	HCAPLUS
Ishihara, K	1999	31	1231	Polym J	HCAPLUS
Ishikawa, E	1983	4	209	J Immunoassay	HCAPLUS
Isikawa, E	1983	18	219	Immunoenzym Tech	
Kojima, M	1991	12	121	Biomaterials	HCAPLUS
Lu, D	1991	3	127	J Biomater Sci Polym	HCAPLUS
Orci, L	1985	28	528	Diabetologia	HCAPLUS
Osborn, M	1978	77	R27	J Cell Biol	MEDLINE
Sakaki, S	1999	47	523	J Biomed Mater Res	HCAPLUS
Shaw, D	1980			Introduction to coll	
Wisdom, G	1976	22	1243	Enzyme-Immunoassay	HCAPLUS

L82 ANSWER 21 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:274659 HCAPLUS

DOCUMENT NUMBER: 129:26995

TITLE: Polymeric solid support-immobilized antigen or antibody and its use

INVENTOR(S): Sakaki, Shujiro; Shudo, Kenjiro; Yamada, Akira; Matsuyama, Kazuo; Nakabayashi, Nobuo; Ishihara, Kazuhiko

PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan; Nakabayashi, Norio; Ishihara, Kazuhiko; Foundation for Scientific Technology Promotion

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10114800	A2	19980506	JP 1996-271126	19961014
PRIORITY APPLN. INFO.:			JP 1996-271126	19961014

ED Entered STN: 13 May 1998

AB The disclosed antigens or antibodies are coupled to polymeric solid support through phosphorylcholine groups and used for immunoassay. The phosphorylcholine-containing polymer is e.g. polymer comprising 2-methacryloyloxyethyl-2'-(trimethylammonio)ethylphosphate (MCP). Copolymers of MCP and Bu methacrylate, methylmethacrylate or 2-hydroxyethyl methylmethacrylate were prepared, coated with anti-mouse antibody for immunoassay.

IC ICM C07K017-08

ICS G01N033-543; C07K016-00

CC 15-2 (Immunochemistry)
Section cross-reference(s): 9

IT Immunoassay

(polymeric solid support-immobilized antigen or antibody and its use)

IT 67881-98-5DP, polymers and copolymers 67882-00-2P

125275-25-4P 134483-35-5P 148569-41-9P